

ADJECTIVE ORDER IN ARABIC

by

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I am A. Sabbagh certify that this thesis has been written by me, that it is the record of work carried out by me, that no material is included for which a degree has previously been conferred upon me, and that all material which is not my work has been identified.

To my family

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

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Abstract

This thesis is based on a computerized corpus of Modern Standard Arabic. The Oxford Concordance Programme was employed in order to process the data and pick out different functions of the Arabic adjectives. The data is taken from over two thousand two hundred pages of the 20th century Arabic texts. This thesis discusses adjective types, word classes and order when they occur in the same NP or predicatively modifying the same head noun. Reference is also made to adjectives in other languages such as English. A prototypical account for the various types of Arabic adjectives is suggested according to which three main types are postulated : Simple, Participial and Denominal. These types are shown to relate to some syntactic, semantic, and morphological criterial features, which also play an important role in deciding the order of adjectives in Arabic.

An argument for an independent adjective word class in Arabic is put forward since the inclusion of Arabic adjectives with nouns by the traditional and by some modern linguists is found to be inadequate. Some new criterial tests with respect to Arabic adjectives have been developed which provide supporting evidence for a separate adjective word class.

The denominal adjectives are further investigated and shown to have an infinite number of meanings which can only be determined with respect to a specific modified head N. They are shown to have some nominal characteristics which decide their order when they cooccur with other types of adjectives. It is argued that although Arabic denominal adjectives are morphologically unified since they take one suffix, those derived from concrete bases are not predictable, whereas those derived from quadriliteral abstract bases are predictable.

Finally the types of Arabic adjectives are brought together in order to account for their order when they occur in the same NP. A review of several studies on adjective order, particularly English, shows that little has been contributed to our understanding of Arabic adjective order. It is argued that there are two important rules which can account adequately for Arabic adjective order. These rules account for a very significant part of the data, and relate neatly to the types of adjectives postulated. The first rule predicts that Arabic adjectives occurring, either attributively in the same NP, or predicatively and modifying the same head N, are ordered according to the "heaviness" hierarchy : comp-A > construct-A > Single unmodified A. This hierarchy predicts that the heavier the adjective, the nearer to the end of a sequence it occurs. Since this hierarchy does not predict the order of various adjectives at its lowest level, a second rule is established which accounts for the order of various single unmodified adjectives : Head N + Denominal A + Simple A + Participial A.

Symbols and Abbreviations

A	: Adjective
ACC	: Accusative
act part	: active participle
AP	: Adjective Phrase
Attrib	: Attributive
comp-A	: Adjective with complement
COM	: comparative
construct-A	: Adjective introducing a construct phrase
DEN	: denominal adjective suffix <i>-iyy</i>
F.	: Feminine
GEN	: Genitive
M.	: Masculine
N	: Noun
NOM	: Nominative
NP	: Noun Phrase
Part	: Participial adjective
pass part	: passive participle
PL.	: plural
Pred	: Predicative
Sg.	: Singular
TAG	: traditional Arab grammarians
V	: Verb

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CHAPTER I
INTRODUCTION

1. Modern Written Arabic :

The form of Arabic studied in this thesis is Modern Written Arabic, which is neither stylistically very high nor stylistically low. It is rather a unifying literary form of all Arab nations. Modern Written Arabic is used in courts, universities, textbooks, writing media etc. It is the official written language used in the Arab countries.

In linguistics there are many different terms which are used for the same variety such as :

1. Modern Written Arabic
2. Standard Arabic
3. Literary Arabic
4. Modern Standard Arabic
5. Qur'anic Arabic
6. Classical Arabic

It is generally believed that written Arabic has a uniform set of syntactic and phonological components. The main different component resides in the lexicon. This vocabulary difference is due to the historical development of Arabic which made contact with various languages borrowing different lexical items. Thus, there is a need for technical terminology, which sometimes has grammatical implications (see the discussion of "compounds" in Chapter V). The main power of the solidarity of one Arabic form is due to its stylistic variations. Arabic ranges from the highly respected variety of the Holy Book to the low variety of the spoken form of the home and the street.

1.1 The Examples Used in This Study :

We need linguistic data to work on if we want to do linguistics at all. This study is corpus-based, drawing on certain Arabic texts written between 1938 and 1982 by six different contemporary authors in a total of 2227 pages as shown in Table (1). Although the author of this study is a native speaker of Arabic and studied Arabic at school and in college, he did not depend on himself as a source of data, in order to avoid the danger of

devising examples to fit a pre-existing analysis. One important characteristic of texts in linguistic investigation is that they should exist independently of the investigation carried out by the researcher. This is because the text is there for any reason texts may be for, but surely not as a convenient set of data for the investigator to work on. It follows that from the investigator's point of view the texts provide objective backgrounds. In contrast, the method followed by investigators who construct linguistic data and themselves assess their acceptability is not objective. For these reasons the author depends on the examples taken from the eleven texts and sometimes from other sources such as the Quran and different grammar books.

Title And Author of Texts

Texts	Authors	Year	Reference No	No of Pages
A. ?al-baab	G. kanafani	1964	1-195	70
B. baytun min laHm	Y. Edriis	1971	200-865	140
C. caSfuur min Al-Jarq	T. Al-Hakiim	1938	1000-1592	207
D. layaali Alf laylah	N. MaHfuuZ	1982	2000-3036	293
E. ?imra?ataan wa rajul	bint Al-huda	1977	3100-3418	140
F. ?uqtulha	Y. Edriis	1982	3500-3938	122
G. ?aT-Tariiq	N. MaHfuuZ	1964	4000-4520	182
H. ?aθ-θalj ?al-?aswad	R. ciSmat	1978	5000-5674	140
I. ?awlaad Haraitna	N. MaHfuuZ	1978	6000-7917	552
J. xaan ?al-xaliil	N. MaHfuuZ	1946	8000-9904	259
K. ra?aytu fima yara ?an-naa?im	N. MaHfuuZ	1982	10000-10340	173

Table (1)

To identify the source of each example cited we will use a letter, which refers to the title of the text from which the example is extracted corresponding to (A-K) in the above Table, and numbers, which refer to the exact page number on which the example occurs. Thus, for example, (B50), following an example, means that that example is taken from text B in Table (1), namely, *baytun min laHm* "A House of Flesh", and occurs on page 50 of that text¹.

It must be emphasized that the main limitation imposed on this study is set by the corpus itself. The adjectives investigated are limited to those occurring in the data. However, further examples from other sources, such as the Quran and some grammar

books, are used to assist in solving problems and enriching our understanding of the data.

The collection of the data in this study is different from all the similar studies produced in the literature treating English adjectives. For example, the studies of Ljung (1970), Isitt (1983), Warrent (1978) and (1984) depend on already available materials. In all these studies the authors did not have to read some materials, select the adjectives and then type the examples. They did not have to mark each occurrence of an adjective so that it would be identified to the OCP (Oxford Concordance Programme) since the data is English and the suffixes are easily identified by the OCP. In our corpus we have to mark each adjective occurring in the data by a following number 2. Moreover, Arabic adjectives inflect for gender, number, case and definiteness. This makes it difficult to identify even those adjectives which have one suffix such as the denominal adjectives *-iyy*, since the possible number of occurrences is 36². The English aforementioned studies used *The Standard Corpus of Present-Day Edited American English*. This is a computer-processible collection of texts, assembled at Brown University during the 1963 and 1964. All the texts are printed in English (500 texts averaging just over 2000 words each)³. While Brown selects the forms and their contexts of the relevant words, Webster provides supplementary reference material and information. Such computerized data sources are not available in Arabic.

1.1.1 The Data :

The present work is concerned with adjectives in Modern Written Arabic with respect to their characteristics, types, order, cooccurrence and criteria of classification. This study is based on a corpus of 1799 different adjectives occurring in 9036 examples. The data is taken from eleven texts written by six authors between 1938 and 1982 (see Table 2 above). Data taken from scientific texts might turn out to give different results especially regarding "compounds in Arabic (see § 6.6.1).

In the early stage of data collection some stories were read and the examples in which the adjectives occurred were written in Arabic along with their page numbers. Later it was found that writing the examples in Arabic was time-consuming. Therefore, the examples

were identified, transliterated and stored directly in the computer, each story separately.

Each group of examples was given certain page numbers, i.e. a group of 15 examples, for instance, can be found between pages 50-58. A printed list was obtained for the adjective examples in each story. The adjectives were then marked by a following number which is "2", i.e. an adjective like *jadiid* "new", for example, would be typed *jadiid2*. In English you can easily obtain a list of adjectives ending in, for example, *-al*, *-an*, *-ic*, etc. In Arabic you can not because Arabic adjectives, as we noted above, inflect for number, gender, case and definiteness. All these grammatical categories, except definiteness, occur wordfinally. Thus the end of each adjective is not easily identified. Therefore, each Arabic adjective occurring in the data is identified by number " 2 " following it.

Having obtained a list of all the examples occurring in the data, the adjectives were divided into predicative and attributive. Adjectives used predicatively are marked by a following "P" (notice that P is not a phoneme in the language and it follows number "2", therefore, only the adjectives which are marked by "2P", for instance, will be picked by the OCP as predicative adjectives. The adjectives are, then, further divided into participial and non-participial. This, of course, can be further divided into predicative vs attributive, e.g. the marking after the adjective *qaadiratin2P1M* which occurs in an example like the following :

la tazaalu gayru qaadiratin2PM cala ?ixfaa?i xawfiha

still neg. capable of hiding fear

"She is still incapable of hiding her fear" (A52)

The code systems, 2PM, following the adjective *qaadiratin* "capable" shows that :

- i. number 2 means that the form is an adjective
- ii. the letter P means that the form is predicative
- iii. the letter M means that the form is followed by a complement

The same procedures were followed in classifying other adjectives such as :

1. Adjectives occurring as first members in the "construct phrase" are identified by a Z

following the "2", e.g. *?ibnuha ?al-?afTas2Z ?alanfi* "her son, with flat nose".

2. Colour adjectives are identified by a following C, e.g. *?aswad2C* "black"
3. Denominal adjectives are identified by a following 2F, e.g. *Hajariyy22F* "stony".
4. Comparative and superlative adjectives are identified by a following "3"
5. Intensifiers such as *jiddan* "very" or *Haqqan* "truly" are identified by a following 0.

The examples taken from each text were put in sequence according to their occurrences in the original text. Each story was given certain numbers e.g. Text (A) is from 1 to 195, Text (B) is from 200 to 865, Text (C) is from 1000 to 1592 etc. (see table 1 above). Therefore, the number given to each example will indicate the following :

1. The text from which it is taken.
2. The page number
3. The example sequence with respect to the other example occurring in the same text.

The data were stored in the Macintosh, but since the Macintosh cannot run the OCP, the data were transferred from the Macintosh, through Kermit System, to the Vax where the OCP is used. Using the OCP was not easy, but it was fun. To obtain a list of adjectives was easier than to obtain a list of different adjective patterns. Picking the adjective patterns by the OCP was possible most of the time, however, for a few adjective patterns it was not. This is because each pattern has the same vowel system but differs with respect to the consonants occurring in different order, e.g. in the pattern /FaaCiL/, the only identified elements are the vowels. The essential factor in obtaining a list of adjective patterns is the difference between consonants and vowels. The OCP can not differentiate between what is a consonant and what is a vowel. It can only differentiate between different figures. The sign @ means one figure and the sign * means any number of figures including zero. These two signs along with the vocalic system of each pattern were very helpful in identifying the relevant forms. For instance, to obtain a list of all the forms that occur in the pattern of /FaaCiL/ we can use the above two signs as follows :

@aa@i@*2

The first * is used to include the forms which are introduced by the definite article *?al-*, which is a prefix. Following the definite article there must be one figure. This figure is

either a vowel or a consonant, however the possibility of having a vowel is zero, simply because the phonological structure of Arabic prohibits any sequence of more than two vowels. Thus what follows the definite article is obligatorily a consonant which corresponds to the first consonant in our pattern. Then only the forms with a sequence of *aa* followed by a consonant followed by *i* will be picked. The "*" preceding "2" indicates that between the structure of the relevant pattern and "2" any thing can occur including nothing. This is to account for the occurrence of the pattern in different agreement categories, i.e. what can occur between the pattern and number "2" are the different categories of case, gender and number, which follow a suffixation process as we noted above. In this connection the following is illustrative :

- | | |
|----------------|------------------|
| 1. jaalisun2 | "sitting M.Sg." |
| 2. jaalisatun2 | "sitting F. Sg" |
| 3. jaalisiin2 | "sitting M. Pl." |

The stem of the relevant form is *jaalis* which is separated from the final code, i.e. "2", by different suffixes : *-un*, *atun*, and *-iin* respectively. Without having the sign "*" preceding number 2 , we cannot have all these different occurrences of the same Adjective, therefore, the "*" preceding number "2" is necessary. Moreover, the OCP offers different logical varieties such as EXCEPT, AND, OR, IGNORE etc. The process is more complicated than this, and sometimes we need to look at the actual data in order to make any classification, but this is just to illustrate how it works.

1.1.2 The Word List :

To obtain a list of all the adjectives occurring in the data, the OCP picks all those which are marked by a following "2", i.e. different adjectives in different forms in different examples. But such a list will include different duplicates of the same adjective. This is because each adjective, as we noted above, can possibly occur in 36 different forms, in different places in the data. How can we eliminate all these different occurrences of the same adjective? Such a task is not easy since it can be done only manually, i.e. by looking,

first, at the forms and deleting the different occurrences of gender, number and case. Notice that these are suffixes (as opposed to definite/indefinite which is a prefix); therefore a single adjective occurring in these three agreement categories will appear sequentially in the list. Notice that by so doing we limited the occurrences of the same adjective to two : once definite and once more indefinite. The second step is to obtain another list in which each adjective can possibly occur twice : definite/indefinite. From this list the definite article is deleted, and the adjectives are sorted alphabetically by the OCP. Therefore, the two occurrences of the same adjective will appear sequentially, which makes the task of eliminating one of them easier. The third step is to eliminate the second occurrence of the adjective, which is done manually, rather than with the OCP. This list, i.e. the third one, includes all our adjectives occurring in the data including those which occur in the Broken Pl. The citation form used in the traditional grammar books for the verb is the perfective 3rd person M. Sg. indicative. Our citation form for the Arabic adjectives, used in Appendices I-IV, is the indefinite M. Sg. Thus an adjective like *?al-kabiir-at-i* "the-big-F.-GEN" is cited in Appendix I as *kabiir* "big". The list obtained is represented in Appendices I, II, III and IV, which show Simple adjectives (Appendix I), Participial adjectives of Form I and Simple adjective of the /FaaCiL/ pattern (Appendix II), Denominal adjectives (Appendix III), and other Participial adjectives, i.e. those of Forms II-X (Appendix IV). Notice further that the denominal adjective base is cited in Appendix III, i.e. the noun base from which the denominal adjective is derived by the suffix *-iyy*. Unfortunately, time did not permit glosses to be provided for all the different types of adjectives.

1.1.3 Transliteration :

The phonetic symbols used in this study are basically those used in the IPA (1975). The following Charts show the Arabic consonant and vowel inventories. Notice that the emphatic consonants (*?iTbaaq*) are represented by the capital letters : T, D, S, and Z which correspond to the unemphatic t, d, s, and z, respectively.

	Labial	Dental	Alveolar	Velarized	Palatal	Velar	Uvular	Pharyngeal	Glottal
Stops	b	t d		T D		k	q		ʔ
Fricatives	f	θ ð	s z	S Z	ʃ		x g	H c	h
Affricates					j				
Nasals	m		n						
Lateral			l						
Vibrant			r						
Glides	w				y				

		Front	Back
High	Short	i	u
	Long	ii	uu
Low	Short	a	
	Long	aa	

1.2 Purpose And Justification :

The purpose of this study is to investigate the Arabic adjectives with special reference to their order when they occur attributively in the same NP modifying the same head N or predicatively. To achieve this the class of Arabic adjectives is established independently from nouns, and the adjectives are divided according to some syntactic, semantic and morphological criteria into various types which play an important role in deciding their order.

Arabic adjectives have only been vaguely understood and therefore inadequately accounted for by the traditional Arab grammarians and by some modern linguists. In Chapter II the Arabic adjective types are discussed according to the Prototype Theory which provides a unified account for both central members (Simple adjectives) and peripheral ones (Participial and denominal adjectives) which are placed in continua

according to their gradual difference from the former. Since the construct phrase allows as first members either adjectives or nouns it is important for the distinction between the two classes. It also shows that an adjectival construct phrase forms an inseparable unit with the second member in the construct phrase which does not allow expansion, a feature which relates to Arabic adjective order.

Chapter III is concerned with the establishment of Arabic adjectives as a word class separate from nouns, with special reference to the morphosyntactic characteristics. It is argued that the traditional Arab grammarians and some modern linguists analyses advocating for a single word class for Arabic adjectives and nouns is inadequate. Although Arabic adjectives and nouns have some features in common, the features which they do not share outweigh and provide clear evidence as to the establishment of adjectives as an independent word class. Morphologically they differ with respect to gender and number. While gender in adjective is predictable from inspection in nouns it is not. On the other hand, typical nouns take Broken plural whereas typical adjectives take Broken and Sound plurals. It is also discussed that only nouns cannot take the definite article in the construct phrase, cannot take the /FuCL/ plural. These morphosyntactic features provide clear evidence for Arabic adjectives as a separate word class.

Chapter IV is concerned with the syntactic and semantic characteristics of Arabic adjectives. We will show that the distribution of Arabic adjectives differ from that of nouns. Arabic adjectives can occur in the comparative and superlative constructions, occur in the exclamatory *ma* "how" construction, accept modification by *jiddan* which constitutes a dependent item requiring a preceding adjective head. Other criterial tests such as the negative *gayr*, the negative *la* of existence, the maximum generality words, the permutation construction, coordination, subcategorization, and the complementary definiteness system provide clear evidence showing the distributional difference between adjectives and nouns. With respect to substantivized adjectives, adjectives occurring in subject position, for example, it is argued that although adjectives can be substantivized in other languages it is not claimed that they are nouns. Moreover, a close examination of substantivized adjectives shows that they are not without restrictions. The data show that there are three requirements

restricting the occurrence of substantivized adjectives : "human", "definite" and "plural". Semantically adjectives attribute properties whereas nouns are referential expressions. Because of these differences between the two classes, Arabic adjectives are established as an independent word class separate from nouns.

Chapter V discusses Participial and Simple adjectives. The status of Arabic participles is argued to be adjectival since this is consistent with the data and is not syntactically or morphologically contradictory. Both can occur in an endocentric construction attributing a "property" to the preceding head N with which they agree in case, gender, number, and definiteness, a characteristic feature for adjectives. It is argued that Participial adjectives are more verb-like than Simple adjectives since they are the most potential complement-taking and since they share with verbs certain complements. This observation is supported by high frequency correlations from our data. However, in comparison to Participial adjectives, Simple adjectives differ since they can take the comparative and superlative forms, can be modified by *jiddan* "very", can occur in the *ma* "how" exclamatory construction, are derived from corresponding verbs expressing states and are accompanied by the [neutral] or [experiencer] participants, do not have corresponding Form I of the imperative or passive verbs, among other differences.

Chapter VI discusses the Arabic denominal adjectives. It is argued that there are two opposing theories accounting for denominal adjectives. the first advocates for a limited predictable number of meanings for denominal adjectives and the second argues that the meanings of denominal adjectives are theoretically infinite and therefore cannot be predicted. Our position is an extension of the second approach. Although Arabic denominal adjectives take a single suffix, their meanings are not predictable without enough context. Denominal adjectives are divided into Predicating vs Nonpredicating. The data show that the latter have more nouny characteristics since they cannot be graded, cannot be nominalized, do not occur predicatively, can enter into various case relations such as object, instrument etc. The Chapter also discusses the productivity of denominal adjectives, i.e. whether a denominal adjective can be derived from any noun by the suffix *-iyy*. Such discussion is absent from the literature of Arabic adjectives which concentrates only on the phonological and

morphological changes brought by the suffixation of *-iyy*. The 338 base nouns found in the data are divided into types and found that a denominal adjective can be derived from any quadrilateral action noun. This predictability is consistent with our data.

In Chapter VII the types of Arabic adjectives postulated earlier are brought together in order to account for the order of Arabic adjectives occurring attributively in the same NP and modifying a preceding head or predicatively. A review of some selected works shows that little has been done towards an understanding of the Arabic adjective order. This stems from the fact that in Arabic, unlike English, attributive and predicative Arabic adjectives follow the modified head N. Moreover, English does not allow adjectives with complements prenominally since the adjective must be postposed, but Arabic adjectives with/out complements follow the head N. This simple fact which is important in understanding Arabic adjective order seems to go unnoticed. Arabic adjectives are divided into two main types : Single unmodified adjectives (cf. adjectives without complement) and heavy adjectives (adjectives with complement viz comp-A and construct-A). The data show that there are important generalizations deciding the order of Arabic adjectives according to whether or not an adjective is heavy.

Arabic adjectives obey a "Heaviness" hierarchy which predicts that heavy adjectives occur at the end of a sequence further away from the modified head N. Heavy adjectives are defined according to the number of words they contain, the number of branching nodes, and the possibility of expansion. Single unmodified adjectives are by definition not heavy, as opposed to comp-A and construct-A which contain more than one word; the former precede the latter and occur close to the modified head N. Further investigation shows that comp-A is heavier than construct-A since it allows expansion while the latter forms an inseparable unit which cannot be expanded. Therefore, comp-A follows construct-A when occurring in the same NP modifying the same preceding head. Therefore we postulate the following "heaviness" hierarchy :

comp-A > construct-A > single unmodified A

The above hierarchy predicts that single unmodified adjectives occur close to the modified head N followed by the heavier adjectives construct-A, which is followed by the

heaviest adjectives comp-A as follows : Head N + single unmodified A + construct-A + comp-A.

However, since the above hierarchy could not predict the order of the various members in its lowest level, i.e. the order of various single unmodified adjectives, a second rule is argued to be necessary which predicts the order of single unmodified adjectives. This rule is explained in terms of two related principles "noun-likeness" and "verb-likeness". The data show that Arabic noun-like adjectives appear close to the modified head N followed by the more verb-like adjectives. That is, denominal adjectives are found close to the modified head N. The data also show that Simple adjectives (central adjectives) precede Participial adjectives and appear close to the modified head N. Investigation of examples having more than two adjectives in a sequence shows that the adjectives are in accord with the two principles since they appear as follows : Head N + Denominal A + Simple A + Participial A. Thus, Simple adjectives, which are less verb-like than Participials and more verb-like than denominal, appear between the two extremes, i.e. between the most noun-like (cf. denominal) and the most verb-like (cf. Participials). Therefore, a continuum with each of two extremes in each end is formulated in order to explain the order of single unmodified adjectives. Finally, it is important to note that our data provide strong quantitative and qualitative evidence for these rules, which shows the importance of working on a computerized data-base, without which no such generalizations could have been reached.

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- 1 We observed a defect in the OCP (Oxford Concordance Programme) at a very early stage of the data collection. The problem is related to how to make the OCP use the page numbers and the reference numbers we invented. The OCP could not do this job successfully because it could not distinguish between these numbers and number "2" which occur after each adjective in the text which we used in order to identify these adjectives to the OCP. Therefore, we had to put these reference numbers between "< >" since the symbols < > tell the OCP to ignore the numbers occurring between them. Therefore, all the reference numbers are ignored. Consequently, the OCP gives only the line number of the example which occur in the data file that contains all the examples occurring in the data along with their line numbers. Finally we go back to the original text to find the exact page number. This makes it a very complicated process which takes a lot of time, but the problem was beyond our control.
 - 2 There are 2 genders (F. and M.), 3 numbers (Sg., Dual, and Pl.), 3 cases (NOM, ACC and GEN) and 2 forms : definite (?al-) and indefinite. Thus by using what is called "n victoria" the possible forms are $2 \times 3 \times 3 \times 2 = 36$.
 - 3 The corpus is described in detail in Kucera and Francis (1967)

CHAPTER II
THE PROTOTYPE THEORY AND ARABIC ADJECTIVE TYPES

2.1 The Prototype Theory :

The prototype theory has been developed in the past two decades in the realm of cognitive psychology¹ as a reaction against the classical Platonic point of view of categorization and categories². According to the classical view the membership of an entity in a category is defined by the entity's possessing a set of criterial, i.e. singly necessary and jointly sufficient, features. Taylor (1989 : 24) describes the classic view and observes that :

"Any entity which exhibits all the defining features of a category is a full member of that category; any entity which does not exhibit all the defining features is not a member. There are no degrees of membership in a category, i.e. there are no entities which are better members of the category than others."

Therefore, concept membership is a matter of 'yes or no' question rather than 'a more or less'. Since an entity is or is not a member of a given category it follows that the boundaries between different categories must be clearly delineated, disallowing an element from belonging to more than one category. This is noted by Taylor (1989 : 23) who states that according to the classical view a category, once established, divides the universe into two sets of entities-those that are members of the category, and those that are not. There are no ambiguous cases, no entities which 'in a way' or 'to some extent' belong to the category, but which in another way do not.

The other extreme position is presented in Wittgenstein (1953). According to this approach categories are not seen as discrete and absolute but rather fuzzy-edged and contingent. The concept goes very well with Bolinger (1975 : 244) who asserts that the traditional categories of grammar "are not as compact and exclusive as we have been accustomed to think. Even among such things as nouns there are some that are "nounier" than others, more central to what are felt to be the defining characteristics of nouns". Thus, in the old view the parts of speech could be pictured as abruptly distinct, like a new staircase :

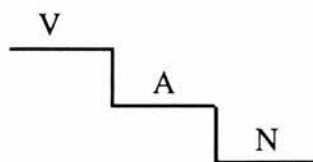


Figure (1)

The new view, on the other hand, would suggest that these categories "shade into one another, like a worn staircase" :

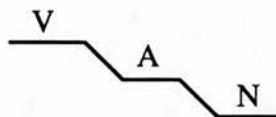


Figure (2)

Moreover, the members of a category are related by what is called "family resemblance". This concept derives from Wittgenstein's (1953), who used the term with reference to the similarities between the members of a category. The idea is that two members of a category do not have to possess the same features. Indeed it might happen that two members belonging to the same category did not have any feature at all in common. This can be illustrated in the following diagram³ :

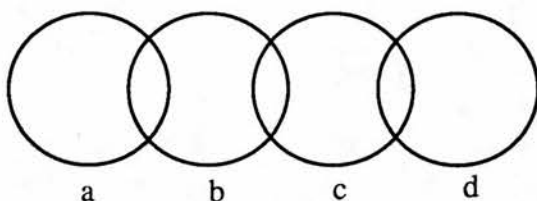


Figure (3)

In the above diagram member "a" may resemble "b", "b" may resemble "c", "c" may resemble "d". However "a" and "d" may not resemble each other. Thus, unlike the classical view, in Wittgenstein's approach the category is not structured in terms of shared features, but rather by a criss-crossing network of similarities. That is, in Wittgenstein's approach some members share some of the prototypical type properties, other members may share other properties. Yet there are no attributes common to all the members (cf. Taylor 1989 : 39).

The notion of categoriality, that the most representative members of a class are those in the focal centre, is supported by much evidence from different aspects of language. On the

other hand, non-central members provide evidence for the existence of borderline members (cf. Givon (1984 :14).

A good example is the recent *Comprehensive Grammar of The English Language* (Quirk et al 1985) as compared to the 1972 copy of the same book. For example, the discussion of English adjectives in Quirk (1985 : 404 et passim) includes a division of the adjective class, according to some criterial features, into central as opposed to peripheral members. It is also interesting to note that McCawley (1986 : 12) has recently compared the parts of speech with the category of biological natural kinds⁴.

The above two positions represented by the classical view and by Wittgenstein seem to be very extreme. A hybrid solution seems to be the compromise. This compromise position is called Prototype theory presented in the works of Rosch (1973,1975), Rosch and Lloyd(1978), Lakoff (1973, 1977, 1982, 1987), Lakoff and Johnson (1980), and Givon (1984 and 1986). According to this theory categories are non-discrete and not always defined in terms of a single criterion. The diagram below is illustrative :

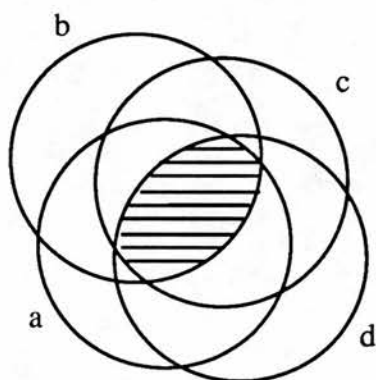


Figure (4)

In the above diagram the members a, b, c, and d share the characteristics in the dark area. Members in this area are the most typical of the category, its prototype. The prototype clustering distribution around the prototype occupies a relatively small space, whereas in the family-resemblance approach of Wittgenstein the clustering will be predicted as uniform distribution of all members along the categorial space. On the other hand, members of a

category in the Platonic approach are in a single categorial point in the continuum. This can be illustrated as follows :

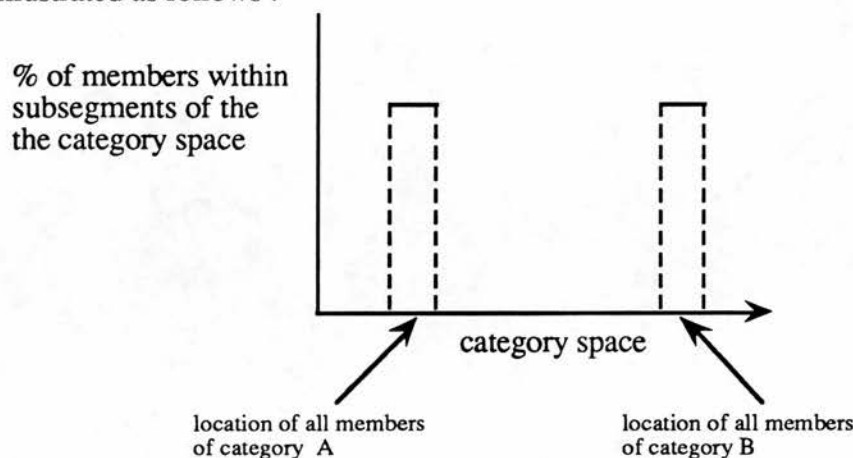


Figure (5)

A prototypical member of a category will display all these characteristics which are representative of the category, and none which are representative of another. Thus prototypical members are maximumly distinct from one another. This principle is stated in Rosch (1978 : 30) who observes that "the implication of the principles of categorization for the horizontal dimension (e.g. V A N) is that to increase the distinctiveness and flexibility of categories, categories tend to become defined in terms of prototypes or prototypical instances that contain the attributes most representative of the items inside and least representative of the items outside the category".

This double characterization of prototypical members means that a prototypical N, for example, will be maximally distinct from a prototypical V. Thus "it is a fact that both representativeness within a category and distinctiveness from contrast categories are correlated with prototypicality in real categories" (cf. Rosch 1978 : 37).

The category members do not enjoy an equal status and some members may be better exemplars of a category than others. Therefore the internal structure of a category is said to include "a focal centre" and "unfocal surrounding", and is a graded structure, with a smooth transition from the centre to the periphery (cf. Rosch 1973 : 130). This resembles Bolinger's worm staircase diagram in (3) above.

Rosch did several experiments which provided supporting evidence for her observation. For example, Rosch (1975) reports on experiment in which the subjects were asked to press a button to indicate true or false in response to statements such as "a dog is a pet.", "a chair is a piece of furniture". Rosch found that the subjects' reaction times were faster for typical members of categories than for nontypical members. Therefore Rosch concluded that conceptual categories such as "bird" or "pet" are not mentally organized according to the principles of set theory, where all members of a category share the essential properties, but are arranged around prototypical members. This suggests that the category name activates the names of more prototypical members.

In another experiment Rosch investigated the structure of natural categories such as Furniture or Fruit. 200 American college students were asked to judge to what extent each of the sixty household items could be regarded as a good example of the category Furniture. The subjects responded using a 7-point scale ranging from 1 (very good example) through 4 (moderate good example), to 7 (very bad example, or not an example at all). Rosch found a very high degree of agreement among the 200 subjects, particularly with regard to items showing a high degree of membership such as *chair, sofa, couch, table, easy chair, dresser etc.* as opposed to other peripheral members such as *telephone, fan, ashtray, picture, closet, clock etc.* This shows a correlation between the degree of category membership and the frequency and order with which category members are named. If people are asked to name exemplars of a category, they tend to mention the more prototypical members first.

Other studies provide similar results. For example, Adamson (1990 : 4) observes that "entities can be members of a conceptual category to the degree that they share the properties of the prototypical members of that category". Similarly Bybee & Moder (1983), who studied strong verbs in English (e.g. *string /strung*), noted that "the class is organized around a prototypical member to which the other members stand in a family-resemblance relation". Ross (1972) presented examples from English to illustrate that the transition from one major syntactic category to another is non-discrete and gradual. That is to say, there are degrees of "nounhood" or "verbhood"; hence his term "category squish". This makes

Ross's observation similar to Bolinger's (1975 : 244) and Rosch's (1973 :130). Similarly Ross (1973) observes that NPs can be hierarchically ordered according to their accessibility to various transformational rules⁵. The most accessible, i.e. the most typical nouns, are those which refer to conscious, volitionally acting, animate creature, primarily human beings. Somewhat lower on Ross's hierarchy are NPs which refer to concrete inanimate, followed by those which refer to events and abstracts. The relevance of the semantic type will be obvious when we discuss, according to some morphological, syntactic and semantic features, the various adjective types in the /FaaCiL/ pattern in Arabic (see Chapter V, particularly § 5.1.3 and § 5.2)⁶.

However, although the transition from one category to another is gradual, as noted above, and as we will show below, it does not follow that the categories are not discrete, since the prototypical members of each category are distinguished (cf. Rosch (1973 : 130). This only shows that borderline members are difficult to treat since they possess some of the properties, rather than all of the properties. This is consistent with Gleason (1961 : 93), who asserts that items which play essentially identical roles in the structure of the language are put together, and "the aim must be a system of word classes characterized by maximum homogeneity within the classes" (cf. 1965 : 130). Therefore, Givon (1984 :14) asserts that there is indeed a great measure of categoriality in human language. Lexical items, morpheme, syntactic constructions and the rules that govern their appropriate use in communication represent a huge body of *prima facie* evidence in support of the existence of categoriality.

2.2 Application of The Prototype Theory to Arabic Adjectives :

In this section we will show that Arabic adjectives can be accounted for according to the prototype theory which predicts that Arabic Simple adjectives (central) are the best exemplars of the adjective class. Peripheral adjectives such as Participial and denominal will be shown to occur along continuums between the prototypical adjectives and verbs (cf. Participial adjectives), on one hand, and between prototypical adjectives and nouns (cf. denominal adjectives), on the other hand. It will also be noted that there are various degrees

of membership, i.e. similarities to the prototype. To show this gradience from the prototype, four types of Participial adjectives can be distinguished, and placed in gradual distance from the prototype according to some morphological, syntactic and semantic features. With respect to the other pole, i.e. the distance of denominal adjectives from prototypical adjectives, it will be noted that predicating denominal adjectives, unlike nonpredicating, are placed closer to prototypical adjectives since they can occur predicatively, accept modification by intensifiers, and can be nominalized. It is important to note that the various types of Arabic adjectives have some features in common since they can occur in an endocentric construction modifying a preceding head N and agreeing with it in case, gender, number and definiteness. They, with the exception of denominal adjectives, which are mainly attributive, occur predicatively. However, unlike the two peripheral sets, Participial and denominal, prototypical adjectives, i.e. Simple adjectives, can take the comparative and superlative forms, can be modified by intensifiers such as *jiddan* "very", can occur in the exclamatory *ma* "how" construction", mainly have corresponding verbs expressing states and are accompanied by [experiencer] or [neutral] participants. In this section we will just summarize the most important criterial features since a full discussion of the various distinguishing features is in order in the following Chapters.

Before we discuss Arabic adjectives we will show in § 2.2.1 that Arabic participles in comparison with "free participial modifiers" are more adjectival, and therefore, can be placed closer to prototypical adjectives along a continuum from the most verb-like to the most adjective-like. Then we will observe that English participles can be placed along a similar continuum. Finally, we will summarize the most important features of Arabic adjectives : Simple, i.e. central (in § 2.2.2), Participial (in § 2.2.3) and denominal (in §2.2.4).

2.2.1 Adjectival and "free participle modifiers" :

In this section it will be argued that, although Participial adjectives derive from corresponding transitive verbs taking an accusative NP complement, they are less verb-like

than "free participle modifiers" (henceforth Hal), and can be placed further from the verb.

Wright (1896 Vol I : 131-132) treats Participials as adjectives and writes that⁷ :

"these nomina agentis are not only real participles, indicating a temporary, transitory or accidental action or state of being, but also serve as adjectives or substantives, expressing a continuous action, a habitual state of being, or a permanent quality."

The participial adjectives lie towards the boundary between the verb and the adjective. Since they possess some of the properties of the relevant categories and lack other properties, they cannot be central members of these categories. It will be argued that the "free participle modifier" is more verbal than the participle, and it will therefore be placed close to the verb. However, with respect to the other end, i.e. central adjectives, the participle will be placed closer to central adjectives.

Lewkowicz (1967) studied Arabic participles from a transformational point of view and used the term participle to refer to "free participle modifiers". However, in this study we will restrict the term participle to the adjectival form and use the Arabic term *Hal* "circumstance" to refer to such forms⁸. Thus the term participle will be used to refer to the adjectival /FaaCiL/ i.e. the participial adjectives which, like the central adjectives, have attributive and predicative functions. Participial adjectives and Hal share the same patterns. Therefore it is important to discuss briefly both and show their similarities and differences. Ibn Yaciish (died 1245) (1966 Vol II :) defines Hal with four characteristic features as follows⁹ :

1. It is *waSf* "descriptive"
2. It expresses the state or condition of the subject or object
3. It is *faDlah* "redundant"
4. It is *manSuub* "accusative"

Thus the Hal expresses a state or condition of the subject or object at the time of the main clause event and is valid to answer the question of How? In this connection the following are illustrative examples :

- 1.a jaa?a ?alwalad-u raakib-an
 came he the-boy-Nom riding-Acc
 "The boy came riding"

- 1.b jaa?-at ?al-bint-u raakib-at-an
 came-she the-girl-Nom riding-fem-Acc
 "The girl came riding"
- 1.c raakib-an jaa?a ?alwalad-u
- 2.a ra?ay-tu ?alwalad-a ?al-raakib-a
 saw-I the-boy-Acc the-riding-Acc
 "I saw the riding boy"
- 2.b ra?ay-tu ?al-bint-a ?al-raakib-at-a
 saw-I the-girl-Acc the-riding-fem-Acc
 "I saw the riding girl"
- 2.c *?al-raakib-a ra?ay-tu ?alwalad-a
- 2.d jaa?a ?alwalad-u ?al-raakib-u
 came he the boy-Nom the-riding-Nom
 "The riding boy came."
- 2.e marar-tu bi walad-in raakib-in
 passed-I by boy-GEN riding-GEN
 "I passed by a riding boy."

The underlined items in (1) are Hal and in (2) participles. Both occur in the accusative case. In (1.a) and (2.a) they are masculine and in (1.b) and (2.b) they are feminine since both agree with their antecedents¹⁰. However, in (1) they function as Hal and in (2) as participial adjectives. Example (1.c) shows that the Hal can occur in different positions, i.e. either following its antecedent, *?al-walad-u* "the boy", as in (1.a) and (1.b) or preceding as in (1.c); however the participial adjective must follow its head noun therefore (2.c) is unacceptable. The Hal forms in (1) are all indefinite and in the accusative. The participial adjectives in (2) can be definite (1.a, b, and d), indefinite (1.e), nominative (1.d) or genitive (1.e), depending on the head noun they modify. Thus the Hal in Arabic is always in the indefinite accusative and may occur in different positions. The participial adjective, on the other hand, always follows the head noun with which it agrees (case, gender, number and definiteness). Consider the following examples.

- 3.a ra?ay-tu ?al-bint-a ?al-raakib-at-a Himaar-an
 saw-I the-girl-ACC the-riding-F-ACC donkey-ACC
 "I saw the girl (who is) riding a donkey."
- 3.b *Himaar-an ra?ay-tu ?al-bint-a ?al-raakib-at-a

- donkey-ACC saw-I the-girl-ACC the-riding-F-ACC
 "I saw the girl (who is) riding a donkey."
- 4.a ra?ay-tu ?al-bint-a raakib-at-an Himaar-an
 saw-I the-girl-ACC riding-F-ACC donkey-ACC
 "I saw the girl riding a donkey."
- 4.b Himaar-an ra?ay-tu ?al-bint-a raakib-at-an
 donkey-ACC saw-I the-girl-ACC riding-F-ACC
 "I saw the girl riding a donkey."

Examples (3-4) demonstrate that both forms, the participle and the Hal, can take object NP complement. In (3.a) the participial form *?al-raakib-at-a* "the riding" modifies the preceding head noun and agrees with it according to the four grammatical categories. It is followed by its object *Himaar-an* "donkey". The relation between the participle and its object complement is evidenced by the fact that when the participle is deleted the example is unacceptable : **ra?ay-tu ?al-bint-a Himaar-an* "I saw the girl donkey". This is also true for the Hal.

Example (3.b) is ruled out because the NP complement of the participle, *Himaar-an* "donkey", does not follow its participle. On the other hand, the NP complement of Hal can precede its Hal, therefore, example (4.b) is acceptable. Thus both participial adjective and Hal can take object dependents; however, the participial dependent must follow its participle whereas the Hal dependent, like the verb dependent, can occur in different positions whether preceding or following its *Hal*, as noted by Wright (1898 Vol II : 118). When the head noun is indefinite accusative, as in (5), it is difficult to decide whether the form is a participle or a Hal since in this situation the participle will be similar to the Hal, i.e. it will agree with its head noun and occur in the indefinite accusative :

- 5.a ra?-a caliy-un bint-an raakib-at-an (Both readings)
 saw Ali girl-ACC riding-F-ACC
 "Ali saw a riding girl" or "Ali saw the girl riding ... "
- 5.b raakib-at-an ra?-a caliy-un bint-an (Hal reading)
 riding-F-ACC saw Ali-NOM girl-ACC
 "Ali saw a girl riding ... "
- 5.c *raakib-at-an ra?-a caliy-un bint-an (Participial reading)
 "Ali saw a riding girl."

The underlined item *raakib-at-an* "riding" in (5) can be :

i. A participial form modifying the preceding head noun *bint-an* "girl" and agreeing with it according to the four grammatical categories. Thus the sentence will mean "Ali saw a riding girl". Preposing of the form in question is not permitted for this reading, therefore (5.c) is unacceptable.

ii. A *Hal* since it states the condition of the object *bint-an* "girl". Thus the example means "Ali saw a girl riding ...". Preposing of the relevant form is optional for this reading, therefore example (5.b) is acceptable.

Thus, although the *Hal* and the participle lack the formal categories of tense and person which are restricted to prototypical verbs, they share with the verb the syntactic feature of subcategorizing for NP complement. This is also noted by Wright (1889 Vol II : 63).

Thus in a scale which has an adjective at one end and a verb at the other, the *Hal* is placed close to the verb whereas the participle is placed close to the adjective since they have different features which are characteristic of different categories. This can be explained as follows :

1 . Like the verb complement, preposing of the object complement is allowed only for *Hal*, therefore example (6.a), below, is acceptable whereas (6.b) is not :

6.a *Himaar-an jaa?-at ?al-bint-u raakib-at-an*

6.a **Himaar-an jaa?-at ?al-bint-u ?ar-raakib-at-u*

2 . Like the verb and its complement, preposing of both the *Hal* and its complement is possible. However, preposing of the participle and its complement results in unacceptability since the participle, like the adjective, must follow the modified head N. Therefore, (7a), where a *Hal* is preposed, is acceptable as opposed to (7.b), which is unacceptable.

7.a *raakib-at-an Himaar-an jaa?-at ?al-bint-u*
 riding a donkey came the-girl

7.a **?ar-raakib-at-u Himaar-an jaa?-at ?al-bint-u*
 the riding donkey came the girl

3. The Hal, like the verb, does not inflect for different cases since it is invariant. On the other hand, although the participle, like the Hal and the verb, inflects for gender and number, it drives further away from both since it inflects for different cases. Moreover, the participle case inflection is similar to that of the adjective since it must agree with the preceding head noun.

4. Like the verb, the Hal does not take the definite article. The participle, however, like the adjective, takes the definite article if its head noun is definite.

Therefore, it can be concluded that the participle in comparison to the Hal is more adjectival and is placed close to the adjective since it shares with it more syntactic and morphological features. Thus with regard to one end of the continuum, i.e. with regard to the verb, the participle seems to have a place further away from the verb. In what follows we will discuss the position of the participle with regard to the other end, i.e., the adjective. The similarities and differences between the participle and the adjective will be examined.

To sum up although the Hal and the participle are similar in that they share the same pattern and derive from verbs, they are different since the former is more verb-like as opposed to the latter which is more adjectival.

However, while prototypical adjectives (i.e. central adjectives) have all the characteristic features for central adjectives participial adjectives do not have all of these features. Moreover, participles are differentiated from central adjectives on the basis of other features, as we will see in due course. In summary, the Hal and the participle lie towards the boundary between the verb and adjective. The Hal being more similar to the verb as opposed to the participle which is more similar to the adjective. They can be arranged on a scale from the most verbal to the most adjectival with the Hal and the participle being in between as the following :

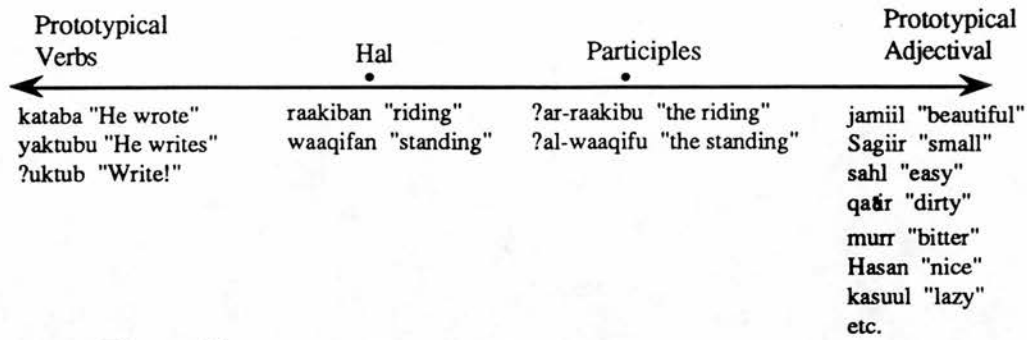


Figure (6)

In the above Figure the participle clearly shows that members of the parts of speech are very distinct from each other in the centers. This is clearly shown by the distinction between verbs on one end as opposed to adjectives on the other end. The Hal is less verbal than the prototypical verbs such as *kataba* "he wrote". However, Hal is more verbal than the participle with respect to its position in the sentence, the position of its complement, and its rejection of the definite article. Therefore the participle is placed further away from verbs and close to adjectives. But the difference between the central members of the adjective class and the participles, as will be noted, provides another evidence showing that participles cannot be included with prototypical adjectives.

English participles can be classified in a similar way, and in accord with the prototype theory. For instance Huddleston (1984 : 324) remarks that the English participles show the tendency for the parts of speech to be very clearly different at their centres but much less easily distinguished at their margins. He arranges the English participles from the most verbal to the most adjectival as follows :

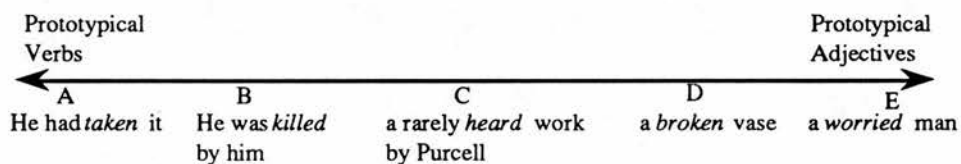


Figure (7)

Huddleston notes that B, in Figure (7) is less verbal than A with respect to its complementation, while C is much less verbal by virtue of the severe restrictions on permitted dependents. On the other hand, D is less adjectival than E since it is ungradable, while C is less adjectival since it cannot occur as predicative complement. Similarly Sweet

(1900 : 115) and Quirk et al (1985 : 75) observe that the name participle reflects the fact that such a form 'participates' in the features both of the verb (*The car was approaching us*) and of the adjective (*the approaching car*)¹¹.

Thus Arabic as well as English participles provide a strong support as to the validity of the prototypical account of the different members which belong to different types of the same class. Therefore, although, the Arabic adjective types, which will be employed in this study, show differences between each other, they belong to the same class of adjective. Such a unified system is provided by the Prototype Theory. Moreover, it is clear that the prototypical theory provides satisfactory results since it enables us to recognize and discuss certain similarities and differences of some aspects of the Arabic language such as the participle and the prototypical adjectives¹².

2.2.2 Simple Adjectives :

The gradience of grammatical categories is not a new discovery. The notion that word classes have central members satisfying a maximum number of criteria of the respective class, and more peripheral, borderline members, was explicitly stated by Crystal (1967). The last few years have seen a rediscovery of category gradience. A prototype account of adjectives entails that some adjectives are better exemplars of the category, while others have more marginal status. The closeness of an item to the, semantically characterized, prototype generally correlates with its closeness to the prototype defined on purely syntactic criteria.

In this and the following sections we will examine briefly¹³ the various types of Arabic adjectives and show how they can be divided into central members (Simple adjectives) and peripheral ones (Participial and denominal). We will place the Participial adjectives in various positions along a continuum between central adjectives and central verbs (see Figure 8 below), and we will show that emotive Participial adjectives are the most adjectival. Therefore, they are placed close to the central class of adjectives followed by those Participial adjectives which do not occur with any complement. Then come the Participial adjectives which occur with a genitive NP complement which are placed further

away from central adjectives followed by the Participial adjectives occurring with accusative NP complement since they are the most verb-like type. Then we will summarize the similarities and differences between Simple and Participial adjectives. Finally, we will show that Denominal adjectives can be placed along a continuum between central adjectives and nouns. Two types of denominal adjectives can be distinguished Nonpredicating vs Predicating, and the former is placed further away from central adjectives towards nouns as shown in Figure (8).

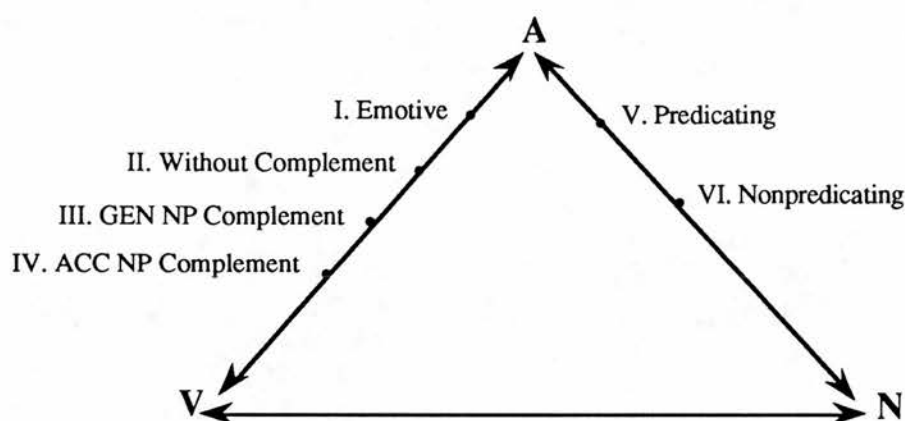


Figure (8)

The above figure shows that the various adjective types can be arranged according to their characteristic features along a continuum between A and V, on one hand, and between A and N, on the other hand. It is also important to note that the various peripheral adjectives either go towards the N end or towards the V end, which constitutes an important feature governing the order of adjectives when they cooccur in the same NP. The most noun-like adjectives (cf. denominal) occur close to the modified head N while the most verb-like adjectives (participial) occur further away from the head N towards the end of the sequence. Between the two extremes (denominal vs Participial) Simple adjectives are found. That is, the order of unmodified adjectives (i.e. adjectives not followed with complements) is Head N + Denominal A + Simple A + Participial A¹⁴. The number of adjectives and their occurrences in our data are shown below in Table (1)

The Number of Arabic Adjectives And Their Occurrences

Type of Adjective	No of Adjectives	No of Occurrences	Percentage of Occurrences
Simple	521	4920	54.4
Participial	940	2878	31.9
Denominal	338	1238	13.7
Total	1799	9036	

Table (1)

The above Table shows that the most frequent type of adjectives is Simple, following is Participial, and finally come denominal. The total number of adjectives occurring in the data is 1799 which occur in 9036 examples. The 1799 adjectives are included in Appendices I-IV. Appendix I includes 316 Simple adjectives (excluding those occurring in pattern /FaaCiL/, i.e. the second pattern occurring in Table (2) below. The pattern /FaaCiL/ of Simple (205 adjectives) and Participial (165 adjectives) adjectives is included in Appendix II, which also includes the passive Participial adjectives of the /maFCuuL/ pattern 176 adjectives. The 338 denominal adjectives are included in Appendix III which shows the base nouns of the denominal adjectives. The other Participial adjectives (599), i.e. excluding those in the /FaaCiL/ and the /maFCuuL/ patterns, are included in Appendix IV.

Prototypical adjectives are differentiated from participles on the basis of some syntactic, morphological and semantic features¹⁵. In this section we will just summarize the features which will be discussed in the following Chapters. Consider the following examples.

- 8.a rajaca ?ila maskan-i-hi ?al-Haqiir-i
 returned to home-GEN-his the-miserable-GEN
 "He returned to his miserable home". (D255)
- 8.b wa tanafasuu hawaa?-an naqiy-an
 and breathed air-ACC fresh-ACC
 "And they breathed fresh air". (I520)
- 8.c ?ibtasama ?aHmad ?ibtisaamat-an gaamiD-at-an
 smiled Ahmed smiled-ACC unclear-F.Sg.-ACC
 "Ahmed smiled an unclear smile". (J52)
- 8.d cadad-u ?al-kuttaab-i qaliil-un
 number-NOM the-writers-GEN little
 "The number of writers is little". (C188)

The underlined items in (8) are Simple adjectives (central adjectives) of various patterns (/FaCiiL/ in (8.a,d), /FaCiL/ in (8.b) and /FaaCiL/ in 8.c). They occur attributively, as in (8.a,b and c) and predicatively, as in (8.d) agreeing with the preceding head N according to the four grammatical categories of case, gender, number and definiteness (for more on agreement between adjectives and the modified head N see Chapter III). Notice that the predicative function does not involve a change in the position of the adjective, but is signalled by having a definite head N and an indefinite nominative adjective. The underlined items in (8) are examples of prototypical adjectives since they have all the prototype criterial features as follows :

1. They occur attributively in an endocentric construction modifying a preceding head N.
2. They occur predicatively
3. They agree with the modified head N in case, gender, number and definiteness.
4. They inflect for the comparative and superlative.
5. They accept modification by intensifiers such as *jiddan* "very".
6. They can occur in the exclamatory *ma* "how" construction.
7. They are derived from corresponding verbs expressing states, and are accompanied by the [experiencer] or [neutral] participants.
8. The verbs from which they are derived generally do not occur in Form I of the imperative or the passive.
9. They have SIMPLE patterns as shown in Table (2), whereas Participial and denominal adjectives have "complex" patterns.
10. Other differences relate to their characteristics in the construct phrase, as discussed in § 2.3.1, in this Chapter.

Simple Adjective Patterns And Their Occurrences

Patterns	Adjectives	Gloss	No of Adjectives	No of Occurrences
1. FaCiL	jadiid	new	160	2634
2. FaaCiL	baarid	cold	205	1322
3. ?aFCaL	?xDar	green	15	300
4. FaCiL	mariH	joyful	44	263
5. FayCiL	Tayyib	nice	6	85
6. FaCL	SaCb	difficult	22	83
7. FaCCaaL	Hassaas	sensitive	31	81
8. FaCuL	Sabuur	patient	16	72
9. FaCLaan	nacsaan	sleepy	6	10
10. FaCaL	Hasan	good	3	8
11. FuCL	murr	bitter	3	15
12. FuCaaL	Jujaac	brave	1	8
13. Others			9	39
Total			521	4920

Table (2)

The above Table shows the numbers of Simple adjective patterns and the number of their corresponding occurrences (i.e. examples). These central adjective patterns differ morphologically from Participial and denominal patterns since the latter two take certain predictable forms. For the various Participial patterns see Table (1) in Chapter V. Unlike Participial and denominal adjectives, these patterns (in Table 2 above) take no affixes, hence the name simple. On the other hand, denominal adjectives take the suffix *-iyy*. That is, Arabic adjectives can be divided into Simple and Complex. The former includes patterns such as those presented in Table (2) above, whereas the latter, which involves certain affixes, includes Participial, Denominal and Comparative adjectives. For more on the Participial and Simple adjectives see Chapter V, and for more on the denominal adjectives see Chapter VI.

2.2.3 Participial Adjectives :

In this section we will compare the various Participial adjectives to central adjectives, i.e. Simple adjectives, and note that the former can be divided into four various types which can be placed in various positions along a continuum with respect to their similarities and differences to the central members of the adjective class as opposed to their similarities

and differences to the central members of the verb class. Emotive Participial adjectives, such as *musalliyatun* "interesting" and *TaaHin* "smashing", in examples (9.a, b) below, (which correspond to type I in Figure 8 above) are placed closer to central adjectives since, unlike other Participial types, they can be modified by intensifiers and have a result reading. Participial adjectives occurring without a complement such as that in (9.c), may have process reading. Therefore, they are less adjective-like, and placed further towards the verb (cf. type II in Figure 8). Participial adjectives with NP complement in the genitive case, as exemplified in (9.d) are less verb-like than those which occur with accusative NP complements (type IV), and are placed closer to adjectives than the latter. It is interesting to note that this difference correlates with Givon's (1990) argument for the existence of a systematic gradation in degree of finiteness among the different non-finite forms of the English verbs¹⁶. Consider the following examples.

I. Emotive

- 9.a ?al-lucbat-u musalliy-at-un
the-game-NOM interesting-F.-NOM
"The game is interesting". (B81)

- 9.b min ?at-tajaarubi ?aT-TaaHinati
from experiences the-smashing
"From the smashing experiences". (K69)

II. Without complement

- 9.c ?ila ?al-?akwaaxi ?an-naa?imati
to the-caves the-sleeping
"To the sleeping caves". (I414)

III. With a genitive NP complement

- 9.d waqafa bayna ?al-muSayyiciin [?al-muntaZir-iin
stood among the-funeral people the-waiting-Pl.M.ACC

xuruuj-i] ?at-taabuut-i
departure-GEN the-coffin-GEN
"He stood among the funeral people (who were) waiting for the departure
of the coffin" (C21)

IV. With an accusative NP complement

- 9.e waqafa bayna ?al-muSayyiciin [?al-muntaZir-iin
stood among the-funeral people the-waiting-Pl.M.ACC

xuruuj-a] ?at-taabuut-i

departure-ACC the-coffin-GEN

"He stood among the funeral people (who were) waiting for the departure
of the coffin"

(C21)

The single-underlined items are Participial adjectives of various types. In (9.a, b) the Participial adjectives are emotive, and therefore, they can be modified by *jiddan* "very". The one in (9.c) occurs without a following complement, but cannot be modified by *jiddan* "very", therefore, it is placed further away from central adjectives. The Participial adjective in (9.d) *?almuntaZiriin* "the waiting", take the following double-underlined NP complement *xuruuji* "the departure" which occurs in the genitive case. The same NP complement can occur in the accusative case, as in (9.e), which makes it similar to the accusative NP complement of the verb. This shows that the NP complement of the Participial adjective can be either genitive or accusative, however, the NP verb complement must be accusative. Therefore, type IV, which is followed by an accusative NP complement is placed further away from central adjectives towards verbs. All these types can occur attributively in an endocentric construction, attributing a "property" to the preceding head N with which they agree in case, gender, number and definiteness, a characteristic feature for central adjectives¹⁷.

The similarities and differences between prototypical and Participial adjectives can be summarized as follows :

1. Both occur attributively in an endocentric construction following the modified head N and agreeing with it in case, gender, number and definiteness.
2. Both occur predicatively.
3. In the construct phrase their similarities can be summarized as follows :
 - a. Neither indicates "possession".
 - b. Neither can be paraphrased by the preposition *li* "for".
 - c. Both can take the definite article when occurring as first members.

Their differences can be summarized as follows :

1. The participle cannot occur in the comparative and superlative forms.

2. The participle cannot be modified by intensifiers such as *jiddan* "very"
3. The participle cannot cooccur with the exclamatory *ma* "how!"
4. The participle can take object complement(s) that occur in the accusative case.
5. The verbs from which the participle is derived express an "Action", and the accompanying nouns are the [agent]. The adjectives, on the other hand, are derived from "state" verbs and their accompanying nouns can be [neutral] or [experiencer].
6. In the construct phrase their differences is presented as in the following Table :

Differences Between The Active Participle and prototypical Adjectives

Features in the Construct Phrase	Participial A.	Central A.
the members cannot be separated	-	+
allows recursiveness in the construct	+	-
the second member can take the accusative case	+	-
the first member can take <i>-n</i>	+	-
the second member is the semantic object of the first	+	-

Table (3)

Table (3) above shows that the participle, unlike the central adjective, since in the construct phrase, it can be separated from the second member which can also take the accusative case. Moreover, the participle allows recursiveness, takes the final *-n* (i.e. nunation), and the second member is the semantic object of the participle. For more on this see § 2.3.1, in this Chapter.

2.2.4 Denominal Adjectives :

While Participial adjectives are arranged along a continuum between central adjectives and verbs, denominal adjectives are arranged along a continuum between central adjectives and nouns, as in Figure (8) above. Simple and Participial adjectives are derived from corresponding verbs (*kabiir* / *kabura* "big/become big", *qaatil* / *qatala* "killing/kill) while denominal adjectives are derived from corresponding noun base by the suffix *-iyy* (*jabal* / *jabal-iyy* "mountain/mountainous). Like central adjectives, denominal adjectives can occur attributively in an endocentric construction modifying a preceding head N with which they agree in case, gender, number and definiteness. However, denominal adjectives, unlike

other, or, for example, because one is made of the other)". Wickens also notes that "western Arabists have traditionally spoken of the Construct, the Construct Case, or the Genitival Relation. All are really little more than labels, and we shall use whichever seems convenient in a given situation."

Thus in the "construct" phrase : *kitaab- u ?al-walad-i* "the boy's book" the first member *kitaab* "book" is possessed by the second member *?al-waladi* "the boy". It is important to note that the adjectives occurring in the construct phrase appear further away from the modified head N when cooccurring with other adjectives. This section does not discuss the adjective order, but concentrates on the characteristic features of the various adjectives (Simple, active Participial, passive Participial, and denominal) when introducing a construct phrase. There are some syntactic, morphological, and semantic characteristics associated with these occurrences. These characteristics are important for the classification of Arabic adjectives.

It will be argued that the first member, whether N or A, generally delimits the the second member in various ways depending on the type of the first member, i.e. whether N or A. The typical meaning of the first member is when there is a possession relationship between the two nouns occurring in the construct phrase, e.g. *kitaabu ?alwaladi* "the boy's book". Such a relation is paraphrasable by the preposition *li* "for" and correlates with other features : (a) the two members can be separated, (b) the first member cannot take the definite article because it is semantically definite, (c) recursiveness is allowed in the phrase. The same characteristics applied when the first member is an abstract noun, however, in this case the meaning of the *li* "for" paraphrase is different, e.g. *Hallu ?al-mas?alati* "the problem solution". The third type, which is our concern, is when an adjective occurs as a first member in the construct phrase. There is a clear similarity between Simple, denominal and passive Participial adjectives when occurring as first members as opposed to active Participial adjectives which differ. Adjective occurring as first members in the construct phrase, with the exception of active participles derived from corresponding transitive verbs, constitute a unit with the second member since they cannot be separated from the second

member, cannot take the final *-n* (henceforth nunation), do not allow accusative case for the second member nor do they allow recursiveness¹⁸.

We define the adjectival construct phrase as a phrase forming an inseparable unit, introduced by an adjective which is followed by an obligatorily genitive noun. We will see that this definition excludes active participial adjectives introducing the construct phrase. This exclusion is according to the following :

1. Quantitatively, the occurrence of the active Participial adjectives introducing a construct phrase is very rare (see Table 5 below).
2. The phrase introduced by an active Participial adjective differs qualitatively from the same phrase introduced by other adjectives because :
 - a. Only with active Participial adjectives is the second member optionally genitive.
 - b. Only with active Participial adjectives is the first member definite and the second indefinite.
 - c. Only with active Participial adjectives recursiveness is allowed.
 - d. Only with the active Participial adjectives the first and second members can be separated, i.e. the phrase does not constitute a unit.

The importance of the discussion in this section is twofold :

1. When we discuss the adjective order (cf. Chapter VII) we will note that the construct-A, i.e. adjectives introducing the construct phrase, are one type of "heavy" adjectives, and, therefore, they occur at the end of a sequence following other single unmodified adjectives, i.e. nonheavy adjectives. We will also discuss the fact that the construct-A is less heavy than the comp-A (adjectives with complements), since the former constitute an inseparable unit which does not allow expansion. That is, the construct phrase unlike the comp-A, since the number of words contained in the phrase is two : the first member (the adjective) and the second member (the following noun), as opposed to comp-A which can contain more than two words.

2. The discussion of the construct phrase shows clear distinctions between nouns and adjectives which provides clear evidence for our claim in Chapter III and IV where we argue for an independent adjective class separate from nouns.

The Arab grammarians claim that annexation results from the joining of two words together and the second of these words substitutes for the "nunation" of the first or any thing which already substituted for that nunation. Since nunation (the occurrence of a final-*n*) is always in complementary distribution with the definite article, no item can take both simultaneously. This automatically excludes certain categories from being first in linear order in the construct phrase. Verbs and prepositions constitute such categories because neither can take the definite article or nunation. Thus if these two categories are excluded from occurring in the construct phrases, we will be left with three likely candidates, namely nouns, adjectives and adverbs since these are assigned the feature of "nunation" and grouped together in the traditional literature as nouns. But to account for such structures we must consider first the noun construct phrase, i.e. when a noun is the first member. The Arab grammarians make a clear distinction in their description of phrases like the bracketed ones in (11) and (12) below :

11. raʔay-tu [kitaab-a ʔal-walad-i]
 saw-I book-ACC the-boy-GEN
 "I saw the boy's book."
12. rafaD-tu [Hall-a ʔal-masʔalat-i]
 refused-I solution-ACC the-problem-GEN
 "I refused the problem solution."

Semantically the bracketed phrases in (11) show the typical relation of "X belongs to Y", and in fact this holds true in the majority of the cases of "real" annexation. However, it should be emphasized here that the sense of belonging in (11) is not exactly the same as that in (12). In (11) there is a clear case of "possession" or "belonging", that is, *kitaab-a* the "book" is possessed by *ʔal-walad-i* the "boy". In (12), on the other hand, the meaning of possession does not exist. Furthermore, the meaning of the *li* "for", as the Arab grammarians say, is implied in (11). However, in (12) the meaning of *li* "for" does not obtain and cannot be construed. The "solution of the mathematical problem" is in no sense owned by the second member in the annexation phrase. What is understood is that such a solution is for a mathematical problem rather than a problem of algebra or logic. This kind of "belonging" is called by the Arab grammarians "ʔixtiSaaS", which is rendered in English

as "specification" or "partial determination". Thus the solution in (12) is partially "delimited" or "specified" as being for a mathematical problem. Therefore the meaning of a paraphrase with the preposition *li* "for" is not that of "owning" but rather of "specification".

Thus two types of *li* are distinguished from each other as follows :

13. raʔay-tu [kitaab-an li ʔal-walad-i]
saw-I book-ACC for the-boy-GEN
"I saw a book for the boy."
14. rafaD-tu [Hall-an li ʔal-masʔalat-i]
refused-I solution-ACC the-problem-GEN
"I refused the solution for the problem."

Example (13) implies "real" ownership; but that is not so in (14). The above discussion and examples make it clear that cases like (11) and (12) should be distinguished semantically in spite of the fact that they structurally reveal features of "real" annexation. In (11) the head of the bracketed phrase, the first N, is owned by the second; whereas in (12) this is not the case. The conclusion we draw from this is that the semantic relation which is indicated by the formula "X belongs to Y" must not be taken too literally in the sense of ownership or possession. That is, not all annexation phrases have the near equivalent paraphrase as the one in (13). Therefore, we suggest one general meaning which includes both (11) and (12) namely "delimiting". That is, in the construct phrase, whether introduced by N or A, the first member delimits the second one.

The first member in the bracketed phrases in (11-12) are semantically definite, i.e. they are not definite by taking the definite article *ʔal-* "the". This can be illustrated by the occurrence of an adjective modifying such members, which must be prefixed by the definite article, if the modified head noun is definite, since Arabic adjectives agree with the modified head noun in definiteness :

15. raʔay-tu [kitaab-a ʔal-walad-i] ʔal-mufiid-a
saw-I book-ACC the-boy-GEN the-useful-ACC
"I saw the boy's useful book."
16. rafaD-tu [Hall-a ʔal-masʔalat-i] ʔas-sariic-a
refused-I solution-ACC the-problem-GEN the-quick-ACC
"I refused quick solution of the problem."

17. * *rubba* [*kitaab-a* ?*al-walad-i*]
many a book-ACC the-boy-GEN
- 18.a *raʔay-tu* [*kitaab-ay* ?*al-walad-i*] ?*al-mufiid-ayn*
saw-I book-Dual ACC the-boy-GEN the-useful-Dual ACC
"I saw the boy's useful book."
- 18.b * *raʔay-tu* [*kitaab-ayn* ?*al-walad-i*] ?*al-mufiid-ayn*
saw-I book-Dual ACC the-boy-GEN the-useful-Dual ACC
"I saw the boy's useful book."
- 19 * *raʔay-tu* [*kitaab-an* ?*al-walad-i*] ?*al-mufiid-a*
20. * *raʔay-tu* [*kitaab-a* ?*al-walad-u*] ?*al-mufiid-a*
saw-I book-ACC the-boy-NOM the-useful-ACC
"I saw the boy's useful book."

In examples (15-16) the underlined adjectives, ?*al-mufiid-a* "the useful" and ?*as-sariic-a* "the quick", are prefixed by the definite article since they modify semantically definite head nouns : *kitaab-a* and *Hall-a* "solution" respectively. These head nouns are not prefixed by the definite article but are modified by definite adjectives. The occurrence of the underlined adjectives in (15-16) without the definite article is unacceptable since Arabic adjectives must agree in definiteness with the modified head noun. Moreover, in (17) the occurrence of the construct phrase of example (11) following the word *rubba* "many a" is ruled out. The reason is that *rubba* "many a" can be followed only by indefinite substantives (cf. Wright 1898 Vol II : 214) ; and since the noun, *kitaab-a* "book", which follows *rubba* "many a", is semantically definite the example is ruled out. This demonstrates that in the construct phrases when the first member is a noun it is semantically definite, rather than morphologically by taking the definite article. Therefore, the occurrence of these head nouns, as first members, with the definite article results in ungrammaticality : *?*al-kitaab-a* ?*al-walad-i* or *?*al-Hall-a* ?*al-masʔalat-i*.

Thus we conclude that nouns as first members in the construct phrase can NOT take the definite article. Furthermore, this kind of restriction follows from the fact that nouns as first members in the construct phrase are semantically, rather than morphologically, definite.

Examples (18-19) demonstrate that "nunation", the final *-n*, can not be suffixed to nouns as first members in the construct phrase. In (18.a) *kitaab-ay* "book Dual" takes the

accusative dual suffix *-ay* rather than *-ayn*, therefore the example is acceptable. Example (18.b) corresponds to (18.a), but in the former the dual suffix is nunated, i.e. takes the final *-n*, therefore the example is ruled out. In example (19), which corresponds to (15), the first member in the construct phrase, *kitaab-an* "book", takes the final *-n*, therefore the example is ruled out.

Thus a noun as the first member in the construct phrase cannot be nunated (i.e. cannot take the final *-n*), whether the final *-n* is suffixed to singular or non-singular nouns.

Example (20) corresponds to (15). Whereas in (15) the second member in the construct phrase is genitive, it is nominative in (20). Therefore (20) is ruled out. This demonstrates that in the construct phrase of nouns the second member must be genitive since if it is other than genitive, it will be ruled out. The conclusion we draw from this is that the second member is always genitive.

To sum up we have discussed that the noun construct phrases have the following features :

1. indicate "possession" or "partial specification".
2. can be paraphrased by the preposition *li* "for".
3. The first member is semantically, rather than morphologically definite.
4. The first member cannot take the definite article *?al-*.
5. The first member cannot be nunated, i.e. cannot take the final *-n*.
6. The second member is always genitive.

2.3.1 Adjectives in The Construct Phrase :

Adjectives as first members in the construct phrase are different. In what follows, although we differentiate between nouns and adjectives as first members in the construct phrase, we focus on the differences between the various types of adjectives. While nouns are paraphrasable by *li* "for" adjectives are not. Moreover, unlike nouns, adjectives as first members in the construct phrase can take the definite article, do not allow recursiveness (except with active participial adjectives) and cannot be separated from the second member (except active Participials); nor can the second member occur in the accusative (except with active Participials). In this connection the following are illustrative examples :

21. ?ayyatuha ?al-muraahiqat-u [?al-waahib-at-u ?al-Hayaat-a]
O the-juvenile-NOM the-giving-F-NOM the-life-ACC
"O juvenile the giving life ... " (H68)
22. waqafa bayna ?al-mufayyiciin [?al-muntaZir-iin
stood among the-funeral people the-waiting-Pl.M.ACC
xuruuj-a] ?at-taabuut-i
departure-ACC the-coffin-GEN
"He stood among the funeral people (who were) waiting for the departure of the coffin" (C21)
23. kaana ?idriis-u [Haa?iz-an ?al-widd-a wa ?al-?icjaab-a]
was Edriis-NOM gaining-ACC the-affection-ACC and the-admiration-ACC
"Edriis was gaining the affection and the admiration." (I17)
24. wa kaan-at [murtadiy-at-an rawb-an]
and was-she wearing-F-ACC dress-ACC
"And she was wearing a dress." (J181)
25. bi HaSiirat-in [maTmuusat-i ?al-lawn-i]
with mat-GEN blurred-GEN the-colour-GEN
"with a mat blurred in colour." (K41)
26. daxala ?ila bahw-in [muzayyan-i ?al-jidraan-i]
entered to hall-GEN decorated-GEN the-walls-GEN
"He entered a hall decorated in walls." ((D173)
27. ?al-fataa [?al-ma?duud-a ?al-?acSaab-i]
the-juvenile the-tensed-ACC the-nerves-GEN
"The juvenile tensed in nerves ... " (C177)
28. fi caalam-in [?adiid-i ?aS-Samt-i]
in world-GEN intense-GEN the-silence-GEN
"in a world intense in silence." (D25)
29. min saHaab-in [naaSic-i ?al-bayaaD-i]
from cloud-GEN pure-GEN the-whiteness-GEN]
"from a cloud (of) pure whiteness." (J138)
30. wa ?al-qahwt-u [?an-naadir-at-u ?al-ma?iil-i]
and the-coffee-NOM the-rare-F-NOM the-similarity-GEN
"And the coffee rare in similarity ... " (J13)
31. ?ibnu-hu [?al-?afTas-i ?al-?anf-i]
son-his the-flat-GEN the-nose-GEN
"His son in the flat-nosed ... " (B65)
32. firaaS-an mugaTTa bi baTTaaniyat-in [turaabiyy-at-i ?al-lawn-i]

mattress covered with blanket-GEN dust-F-GEN the-colour-GEN
 "covered with a blanket grey (dust-colour) in colour." (1159)

33. ?al-fataat-u [?al-casaliyy-at-u ?al-cayn-ayn]
 the-girl-NOM the-honey-F-NOM the-eyes-Dual GEN
 "The girl with honey-coloured eyes ... "

Like the nominal construct phrases, the bracketed phrases in (21-33) are adjectival construct phrases. The first member in these phrases is an adjective : active and passive participial in (21-24) and (25-27) respectively, Simple adjective in (28-31) and denominal adjective in (32-33). Like the nominal construct phrases, the second member in these phrases (with the exception of the examples in which the active participial adjective occurs) is in the genitive case. In (25-27) the second members in the bracketed phrases follow different passive participial adjectives and occur in the genitive : ?al-lawn-i "the colour", ?aljidraan-i "the walls" and ?al-?acSaab-i "the nerves" respectively. Similarly the second members in (28-31) which follow different Simple adjectives occur in the genitive case respectively : ?aS-Samt-i "the silence", ?al-bayaaD-i "the whiteness", ?al-mi@aal-i "the similarity" and ?al-?anf-i "the nose". The second members following the denominal adjectives in (32-33) occur in the genitive case : ?al-lawn-i "the colour" and ?al-cayn-i "the eye" respectively. Thus the second member following the adjective in the construct phrase is genitive.

Like the semantic interpretation of the first member in (12), the semantic interpretation of the first members in (23-33) cannot be that of "possession", but rather of "delimitation". The underlined adjectives in (25) or (28), for instance, *maTmuusat-i* "blurred" and *jadiid-i* "intense" cannot be understood to belong to the second members in the corresponding construct phrases. Paraphrasing any of the examples in (21-33) by the preposition *li* "for" is not possible, for instance (21), (25), (28) and (32), repeated for convenience as (34.a, b, c and d) respectively, are unacceptable when paraphrased by the preposition *li* "for" as follows :

- 34.a *?ayyatuha ?al-muraahiqat-u [?al-waahib-at-u li ?al-Hayaat-a]
 O the-juvenile-NOM the-giving-F-NOM for the-life-ACC

- 34.b * bi HaSiirat-in [maTmuusat-i li ?al-lawn-i]
 with mat-GEN obliterated-GEN for the-colour-GEN
 "with a mat obliterated in colour."
 34.c * fi caalam-in [jadiid-i li ?aS-Samt-i]
 in world-GEN intense-GEN for the-silence-GEN
 34.d * firaaS-an mugaTTa bi baTTaaniyat-in [turaabiyy-at-i li ?al-lawn-i]
 mattress covered with blanket-GEN dust-F-GEN for the-colour-GEN

The examples in (34) are unacceptable because they are not paraphrasable by the preposition *li* "for". Thus, unlike nouns, adjectives as first members in the construct phrase are not paraphrasable by the preposition *li* "for".

Moreover, the first members of (23-33) seem to modify the second. In (25), for instance, "the colour" is blurred rather than clear and in (28) "the silence" is intense rather than weak. Similarly in (33) *?al-cayn-ayn* "the eyes" are *?al-casaliyy-at-u* "honey-like" rather than brown or black. However, although the adjective introducing the construct phrase modifies the second member in the phrase, the whole construct phrase modifies the preceding head N. That is, in (33), for instance, the whole bracketed phrase *?al-casal-iyy-at-i ?al-cayn-ayn* "the honey-coloured eyes" attributes a "property" to the preceding head N *?al-fataat-u* "the girl". Thus the adjectival construct phrase modifies the preceding head noun¹⁹.

The underlined adjectives in the bracketed phrases in (21-33) can be either definite or indefinite. They can be morphologically definite since they can take the definite article. In (21-22), (27), (30-31) and (33) the underlined adjectives are prefixed by the definite article since their corresponding head nouns are definite. In (23-24), (25-26), (28-29) and (32) the underlined adjectives do not take the definite article since their corresponding heads are indefinite. In example (27), for instance, the passive participial adjective *?al-maṣduud-a* "the tensed" is introduced by the definite article since its preceding head noun *?al-fataa* "the juvenile" is definite too. Similarly the Simple adjective, *?an-naadir* "the rare", in (30) agrees in definiteness with the head noun *?al-qahwat-u* "the coffee" which is definite. This is true for the active participial adjectives in (21-22) and the denominal adjective in (33). This demonstrates that, unlike nouns, adjectives, as first members in the construct phrase,

can be morphologically definite, i.e. can take the definite article. This can be seen when an adjective, not occurring in the construct phrase, modifies these definite nouns, it must be prefixed by the definite article. The other side of the coin is presented by the examples in which the underlined adjectives are not prefixed by the definite article. In example (29), for instance, the adjective *naaSic-i* "pure" occurs as first member in the construct phrase and is not prefixed by the definite article because its head noun *saHaab-in* "cloud" is indefinite. Such adjectives cannot be semantically definite because their heads are indefinite.

Thus adjectives as first members in the construct phrase can be prefixed by the definite article or not depending on whether the preceding head noun definite or not. Furthermore, unlike nouns, they are not semantically definite. Now consider the following examples :

- 35.a kaana jaab-an kariim-an [Hilw-a ?al-macfar-i]
 was youngman-ACC generous-ACC sweet-ACC the-company-GEN
 "He was a generous youngman sweet in company." (I17)
- 35.b * kaana jaab-an kariib-an [Hilw-an ?al-macfar-i]
- 36.a wa laaHaZa ?anna qadarii [macSuub-a ?al-cayn-ayn]
 and noticed-he that Qadari tied-ACC the-eye-Dual GEN
 "And he noticed that Qadari (is with) tied eyes." (I90)
- 36.a * wa laaHaZa ?anna qadarii [macSuub-an ?al-cayn-ayn]
- 37.a fataat-an [wardiyy-at-a ?al-xad-ayn]
 girl-ACC rosy-F-ACC the-cheek-Dual GEN
 "A girl with rosy cheeks."
- 37.b * fataat-an [wardiyy-at-an ?al-xad-ayn]

The examples in (35-37) show that adjectives (Simple, passive participial, and denominal respectively) occurring as first members in the construct phrase cannot be nunated, i.e. cannot take the final *-n*. In example (35.a) the Simple adjective *Hilw-a* "sweet" occurs as first member in the construct phrase without taking the final *-n*. However, when the same adjective takes the final *-n*, as in (35.b) the example is ruled out. Similarly examples (36.b) and (37.b) are ruled out for the same reason. In (36.b) the passive participial adjective occurs as first in the construct phrase and takes the final *-n*, therefore the example is unacceptable. In (37.b) the denominal adjective *wardiyy-an* "rosy" occurs in the construct phrase as first member and takes the the final *-n*, therefore the

example is unacceptable. Thus Simple, passive participial and denominal adjectives occurring as first members in the construct phrase cannot take the final *-n* "nunation". However, in example (23) the active participle, *Haa?iz-an* "gaining", is the first member in the bracketed phrase and takes the final *-n*. This demonstrates that active participles occurring as first members, unlike the other types of adjectives, can take the final *-n*.

To sum up, it has been argued that when an adjective occurs as the first member in the construct phrase there are certain features which are applicable to types of adjectives which make them different from nouns in such a structure. These characteristics can be summarized as follows :

1. The sense of "belonging" is not applicable.
2. They cannot be paraphrased by the preposition *li* "for".
3. They cannot be semantically definite.
4. They can be prefixed by the definite article.
5. The second member is primarily genitive (except active participles)
6. They add a property to the second member (except active participles)
7. They cannot be nunated (except active participles)

To these characteristics the following can be added which will be the point of discussion in the next section since they are related mainly to participial adjectives.

8. The second members are the semantic "object" (only participials)
9. Allows recursiveness in the construct (only nouns and active participles).

In examples (21-24) the underlined items are active participles of different patterns /FaaCiL/ in (21) and (23) and /muFtaCiL/ in (22) and (24) respectively. In the bracketed phrases in (21-24) the second members are different nouns occurring in the accusative case rather than the genitive²⁰. The active participle in (21) namely *?al-waahib-at-u* "the giving" is followed by the noun *?al-Hayaat-a* "the life"²¹. Similarly the active participles in (22-24) are followed by "objective complements" (as second members) which occur in the accusative case. Like the other types of adjectives, the meaning of "possession" is not possible. In (22), for instance, the active participle *?al-muntaZir-iin* "the waiting" cannot be possessed by the following NP complement *xuruuj-a* "the departure". Like the other types of adjectives, the active participles cannot be paraphrased by the preposition *li* "for".

Thus in (23), for instance, the *li* "for" preposition cannot precede the second member : **Haa?iz-an ?al-widd-a* "gaining the affection". The active participle, like the other types of adjectives, is not semantically definite. If the preceding head noun is definite, as in (22), for example, *?al-mu jayyic-iin* "the funeral people", the active participle agrees morphologically with it by taking the definite article. Therefore, the active participle, like the other adjectives, can occur either prefixed by the definite article or not depending on the preceding head Noun.

Thus the active participle is similar to the other types of adjectives with respect to some features as presented above. However, the active participle is different from all the other adjectives since it is followed by an accusative noun as the second member. This accusative argument is identified as the "objective complement" of the active participle. Like the active participle, the passive participles in (25-27) above are followed by the second members in the construct phrase ; and these members are semantically objects. In (25), for instance, *?al-lawn-i* "the colour" is being blurred ²², i.e. from the quality attributed to the second members it is understood that they are "objects". Thus the participles (active and passive) can be followed by the "objective complement" which occurs in the accusative with the active and in the genitive with the passive. However, the active participle NP complement (second member) can occur in the genitive. Thus the second member in (21), for instance can occur in the genitive : *?al-waahibat-at-u ?al-Hayaat-i* and the example is still acceptable.

It must be noted that this aspect of the Arabic grammar is characterized by a great variation. This is noted by many linguists such as Hasan Vol III (1976 : 296). This is also noted by Wright Vol II (1898 : 63) who states that "if the nomina agentis has but one objective complement, this may be put either in the accusative or in the genitive". Wright gives the following examples :

- i. wa [?al-kaaZim-iin ?al-gayZ-a]
 and the-restraining-Pl.M.ACC wrath-ACC
 "And (those who are) restraining the wrath."

- ii. wa [?al-mu?t-uun ?az-zkaat-i]
 and the-paying-Pl.M. NOM the-poor-rate-GEN
 "and (those who are) paying the poor-rate."

In (i) the second member occurs in the accusative case whereas that in (ii) occurs in the genitive; and in both cases the second member is the "objective complement".

Hasan counts 36 different structures for the different occurrences of the first and second members in the construct phrase. These are as follows :

The Adjectival Construct Phrase	
First Member	Second Member
Definite	1. Definite 2. Indefinite
Indefinite	1. Definite 2. Indefinite

Table (4)

The first member in the first row is definite; and can occur in three different case (nominative, accusative and genitive). Each of its corresponding second member in the same row has three different cases. Thus $3 \times 6 = 18$; and another 18 for the second row.

Not all these different possibilities are equally acceptable (cf. Hasan Vol III 1976 : 299). Hasan also notes that there are some which are weak, some which are bad usage and some which are unacceptable. We will not discuss all these variations. He notes (Vol III : 315) that when the first member is a Simple adjective the second preferably occurs in the genitive and when the first member is an active participle, the second preferably occurs in the accusative. If this is true, the preferable cases are as follows :

1. Simple adjective + genitive
2. Active participle + accusative

It is also noted by Hasan (Vol III : 311) that the participle must be considered more adjectival when its "objective complement" occurs in the genitive²³. Furthermore, there are some syntactic evidences, which will be discussed in due course, that support the claim that the second member following the active participle is preferably accusative (coordination, separation of the two members by an adverb, modification of the objective complement by

another adjective and nunation which is attached only to active participles when they occur as first members).

Our data help us in eliminating the cases which do not occur. In examples (21) and (23) the underlined active participles are followed by the second members which are definite by taking the definite article : *?al-Hayaat-a* "the life" and *?al-widd-a* "the affection" respectively. In (24), however, the second member is indefinite since it is not prefixed by the definite article. Thus the second members following the active participle can be indefinite or prefixed by the definite article.

In (25-33) all the underlined adjectives (passive, Simple and denominal) are followed by definite nouns prefixed by the definite article. In the whole data of the construct phrase these adjectives are followed by definite nouns. Some of these nouns are either definite by taking the definite article as above or by taking a referential pronoun referring to a preceding head or by occurring in the construct phrase. The first two cases namely the definiteness by taking the definite article and by taking a referential pronoun occur with Simple, passive and denominal adjectives. The last case viz. the definiteness of the second member by occurring in another construct phrase is restricted to active participles²⁴. Now consider the following examples which show definiteness by taking a pronoun :

38. *?ila wajhi-ha* *?al-?asmar-i* [*?al-jamiil-i*
to face-her; the-brown-GEN the-beautiful-GEN

naaZir-ay-hi]
view-Dual GEN-his;
"to her brown and beautiful (in) view face." (J122)
39. *wa* [*ma?luuf-i* *suluuk-i-ka*]
and familiarized-GEN behaviour-GEN-your
"and your familiarized behaviour." (G189)

In examples (38-39) the underlined adjectives are Simple and Passive adjectives respectively²⁵. The second member following each takes the clitic 3rd and 2nd person pronoun *-hi* "his" and *-ka* "your", respectively : *naaZir-ay-hi* "his views" and *suluuk-i-ka* "your behaviour". Therefore the relevant nouns are definite. Consequently the second

members following adjectives, except the active participle, is definite. There is no occurrence in the data of an indefinite noun following these adjectives. However, the second member following the active participle can be indefinite as shown in (24). Therefore, according to the occurrences in the whole data, The second member following Simple, passive and denominal adjectives is definite; however, when it follows an active participle it can be definite or indefinite. Thus, when the first member in the construct phrase is Simple, passive or denominal adjective, the different possibilities represented in Table (4) above are narrowed down to 18 since only the first case in the first row ($3 \times 3 = 9$) and the first case in the second row ($3 \times 3 = 9$) exist. Moreover, the first member is mostly indefinite. The definite first members occur only in 20 examples. Therefore, the majority of the occurrences is when : indefinite + definite. In this connection the following Table is illustrative :

Occurrences of The Adjectival Construct Phrase

First Member	Second Member	Occurrences	Remarks
indefinite	definite	416	
	indefinite	2	only active participles
definite	indefinite	1	only active participles
	definite	19	only 2 active participles
Total		438	

Table (5)

Table (5) above clearly shows that indefinite + definite is the most frequent pattern in the whole data. It is represented by 416 examples. The next case is when definite + definite; this case is represented mostly by Simple adjectives. The occurrence of indefinite nouns following an adjectives is restricted to active participles; and there are only three examples of this sort. The exceptional cases, when the second member is indefinite, are related to the active participles. This kind of generalization seems to exist in the work of Sibawayhi in his famous book ?al-kitaab "The Book". Carter (1972) notes the different variations that occur in "The Book" and states :

"That there has been analogical extension in both directions is clear from the evidence : the active participle (or, to give it its Arabic name, ?ism ?al-faaciil "the agent noun") is seen to function not only as a verb in Daaribun Zaydan "striking Zayd" but also as a noun in the "improper" annexation construction, viz. Daaribu Zaydin , lit. "striker of Zayd".



Carter set out in the form of parallel tables all the variations on the two constructions which appear in Sibawayhi's argument in both editions of "The Book" Buulaaq and Derenbourg and includes the reference page numbers of the examples occurring in these two editions respectively as follows :

Construct Phrases in Sibawayhi's : The Book

Active Participles		Refer- -ence	Simple Adjectives		Refer- -ence
1st Member	2nd Member		1st Member	2nd Member	
1. Daarib-un	Zayd-an	82/70	-----		
2. Daaribu	Zayd-in	86/72	Hasanu	?al-wajhi	100/82
3. ?al-Daaribu	Zayd-an	93/77	?al-Hasanu	wajh-an	103/83
4. ?al-Daaribu	?ar-rajul-a	93/77	?al-Hasanu	?al-wajh-a	103/84
5. ?al-Daaribu	?ar-rajul-i	93/77	?al-Hasanu	?al-wajh-i	103/84
6. ?al-Daarib-uun	?ar-rajul-a	94/78	?aT-Tayyib-uun	?al-?axbaar-a	103/84
7. ?al-Daaribu	Zayd-in	94/78	?aT-Tayyib-uu	?axbaar-in	104/84

Table (6)

In the above Table the active participle has seven different occurrences (cf 1-7), and in each case (except in 1) the Simple adjective is matching. Thus according to Carter, who drew his examples from Sibawayhi's, the occurrence of the Simple adjective in (1) in Table (6) is not present in "The Book" : **Hasan-un wajh-an* "beautiful in face". This is the main difference between active participles and Simple adjectives. The Table also demonstrates that Simple adjectives are not nunated (except when plural as in example (6)). Moreover, the absence of structure of indefinite + indefinite for the Simple adjective demonstrates, as we found in our data, that it is ruled out. The occurrence of Simple adjectives followed by indefinite nouns as in (3) and (7), in Table (6) above, does not exist in our data since it is found that only active participles are followed by indefinite nouns. However, The occurrence of Simple adjectives followed by definite nouns in the data provided by Carter in Table (6) is 4 : 2. Thus the structure Simple adjective + definite is more. This is the same result found in our data (see Table (5) above, which shows that there are 435 adjectives followed by definite N as opposed to 3 adjectives (cf. active Participial) followed by indefinite N). The main conclusion we draw from this is that although, Simple adjectives are found to match active participles there is one occurrence which is not possible for Simple adjectives namely : *indefinite Simple adjective + (in)definite Acc (**Hasan-u wajh-*

an , **Hasan-un wajh-an* and **Hasan-un ?al-wajh-a*). Therefore, the accusative occurrence following Simple adjective is NOT a matter of variation. It is rather unacceptable. This conclusion is also supported by the statistical evidence provided above, from our data and from Carter's observation. Further support is also provided from the general behaviour of the active participle with respect to the structure under discussion viz only active participles allow separation between the first and the second members, only active participles allow recursiveness in the construct phrase, and only active participles allow the modification of the second member by another adjective. These characteristics are the points of discussion in the following point.

- 40.a waqafa bayna ?al-mufayyiciin [?al-muntaZir-iin
stood among the-funeral people the-waiting-Pl.M.ACC

xuruuj-a ?at-taabuut-i]
departure-ACC the-coffin-GEN
"He stood among the funeral people (who were) waiting for the departure of the coffin"
(C21)
- 40.b * waqafa bayna ?al-mufayyiciin [?al-muntaZir-iin xuruuj-a]
stood among the-funeral people the-waiting-Pl.M.ACC departure-ACC
41. wa kaan-at [murtadiy-at-an rawb-an jamiil-an]
and was-she wearing-F-ACC dress-ACC beautiful-ACC
"And she was wearing a beautiful dress."
(J181)
- 42.a ?iqbaal-u ?ar-rijaal-i [mulfit-un ?acyun-a ?usrat-i-hi]
arrival-NOM the-men-GEN attracting-NOM eyes-ACC family-GEN-his
"The arrival of men is attracting his family's eyes."
(J72)
- 42.b * ?iqbaal-u ?ar-rijaal-i mulfit-un ?acyun-a
- 43.a lam takun qaaSid-at-an gaayat-an tastawjibu ?al-cajalat-a
not was intending-F-ACC purpose-ACC requires the-hurry-ACC
"She was not intending a purpose that requires the hurry."
(J40)
- 43.b * lam takun qaaSid-at-an tastawjibu ?al-cajalat-a

The examples in (40-43) demonstrate that the second member following the active participle, i.e. its "objective complement" can occur in a construct phrase with another following noun, as in (40.a) and (42.a), can be modified by a following adjective, as in (41), or can be followed by a full sentence, as in (43.a). These characteristics are not

possible for the second members following the other adjectives, Simple, passive and denominal. In (40) (which is (22) repeated here for convenience) the second member following the active participle is *xuruuj-a* "the departure". It is in a construct phrase with the following noun : *xuruuj-a ?at-taabuut-i* "the departure of the coffin". Similarly in (42.a) the second member *?acyun-a* "eyes" is in a construct phrase with a following noun : *?acyun-a ?usratihi* "his family's eyes". The corresponding examples (40.b) and (42.b) are ruled out because the noun following the second member with which they are in construct are deleted respectively : **?almuntaZir-iin xuruuj-a* and **mulfitun ?acyuna*²⁶. In example (41), which corresponds to (24) repeated here with an adjective following the second member, the second member is modified by a following adjective : *murtadiy-at-an rawb-an jamiil-an* "wearing a beautiful dress". In (43.a) the second member is followed by a full sentence : *tastawjibu ?al-cajal-at-a* "requires the hurry". The corresponding example in (43.b) demonstrates that the deletion of the second member results in unacceptability since it functions as the subject of the following sentence with which the verb agrees in gender (F.) and number (Sg.). Thus the second member following the active participle can have different functions in other structures and the construct phrase introduced by an active Participial adjective does not form an inseparable unit. Now consider the following examples :

44. * bi HaSiirat-in [maTmuusat-i ?al-lawn-i ?al-jamiil-i]
 with mat-GEN obliterated-GEN the-colour-GEN the-beautiful-GEN
 "with a mat obliterated in colour." (K41)

45. * fi caalam-in [jadiid-i ?aS-Samt-i ?aJ-jaamil-i]
 in world-GEN intense-GEN the-silence-GEN the-complete-GEN
 "in a world intense in silence." (D25)

46. * firaaS-an mugaTTa bi baTTaaniyat-in
 mattress covered with blanket-GEN

[turaabiyy-at-i ?al-lawn-i ?al-gaamiq-i]
 dust-F-GEN the-colour-GEN the-dark-GEN
 "a mattress covered with a grey blanket (dust-colour)." (I159)

The examples in (44-46) corresponds to (25), (28) and (32) respectively. In each of these examples there is an adjective, passive, Simple and denominal respectively, followed by the second member which is modified by a following adjective. Therefore, the examples are ruled out. In example (44), for instance the second member is followed by the adjective *?al-jamiil-i* "the beautiful" : **maTmuus-at-i ?al-lawn-i ?al-jamiil-i* . The examples in (45-46) are ruled out for the same reason. Moreover, these nouns (*?al-lawn-i* "the colour", *?aS-Samt-i* "the silence" and *?al-lawn-i* "the colour" respectively) cannot function as first members in the construct phrase, as noted above, simply because they are prefixed by the definite article. Thus simple, passive and denominal adjectives are different from active participles with regard to the construct phrase. Now consider the following examples :

- 47.a haaða [Hasan-u ?al-qawl-i wa ?al-ficl-i]
 this nice-NOM the-speech-GEN and the-action-GEN
 "This is nice in speech and action." (Hasan Vol III : 314)
- 47.b * haaða [Hasan-u ?al-qawl-i wa ?al-ficl-a] (Hasan Vol III : 314)
- 48.a ?anta Daarib-un ?al-liSS-i wa ?al-xaa?in-a
 youSg.M. striking-NOM the-thief-GEN and the-perpetrator-ACC
 "You are striking the thief and the perpetrator." (Hasan Vol III : 314)
- 48.b ?anta Daarib-un ?al-liSS-a wa ?al-xaa?in-a (Hasan Vol III : 314)

The above examples in (47-48) are due to Hasan Vol III (1976 : 314). Hasan notes that in a coordination structure when preceded by a Simple adjective such as *Hasan-u* "nice" both of the coordinated items occur in the genitive case as in (47.a). However, when the first coordinated item is genitive and the second is accusative the example is ruled out. Therefore (47.b) is unacceptable. However, when the first member is an active participle as in (48) the second coordinated noun can occur in the accusative. The other possibility, which is discussed above viz : the possibility that the second member following the active participle is accusative, is when both of the coordinated items are in the accusative as in (48.b). Therefore both examples are acceptable. Now consider the following examples :

- 49.a ?ar-rajul-u [?al-Hasan-u ?al-qawl-i]
 the-man-NOM the-nice-NOM the-speech-GEN
- 49.b * ?ar-rajul-u [?al-Hasan-u jiddan ?al-qawl-i]

- 50.a haDa [Daarib-un ?al-gulaam-a]
 thisM.Sg. striking-NOM the-boy-ACC
 "This is striking the boy."
 50.b haDa [Daarib-un gadan ?al-gulaam-a]
 thisM.Sg. striking-NOM tomorrow the-boy-ACC
 "This is striking the boy tomorrow"

In (49.a) the adjective as a first member in the construct phrase cannot be separated from the second member, with which it forms a closely related association (cf. Wickens 1980 : 48). But in (49.b) when this relation is separated by the occurrence of the adverb *jiddan* "very" the result is unacceptable, therefore, example (49.b) is ruled out. On the other hand, in example (50.a) the active participle is not in a close relation with the following item, therefore, it is possible to separate them from each other by an adverb such as *gadan* "tomorrow" in (50.b). Thus the active participle, unlike Simple adjectives, can be separated from the second member following it.

The last feature which we will consider here is related to recursiveness in the construct phrase. It will be shown that first members when nouns and active participles recursiveness is allowed. However, when the first member is Simple, passive or denominal adjective recursiveness is not allowed. In this connection the following examples are illustrative :

- 51.a kasar-at [zujaaj-a fubbaak-i gurfat-i mudiir-i
 broke-she glass-ACC window-GEN room-GEN director-GEN
 ?ittiHaad-i laacib-ii kurat-i ?as-sallat-i]
 union-GEN players-GEN ball-GEN basket-GEN
 "She broke the glass on the window of the director of the union of
 the players of the basket ball."
 51.b kasar-at [zujaaj-a ?af-fubbaak-i]
 broke-she glass-ACC the-window-GEN
 "She broke the glass of the window ."
 52.a ?ar-rajul-u [?al-munaZZim-u Harakat-i
 the-man-NOM the-organizing-NOM movement-ACC
 quwwaat-i caaSifat-i ?aS-SaHraa?-i
 forces-GEN storm-GEN the-desert-GEN
 "The man organizing the movement of the forces of the storm of
 the desert."

- 53.a Tabiibat-un [raaʔic-at-u ʔal-jamaal-i]
 physician-NOM wonderful-F-NOM the-beauty-GEN
 "A physician wonderful in beauty." (B45)
- 53.b * Tabiibat-un [raaʔic-at-u jamaal-i lawn-i ʔal-baSarat-i]
 physician-NOM wonderful-F-NOM beauty colour-GEN the-skin-GEN
- 54.a ʔinna-ki mutcab-at-un [manhuuk-at-u ʔalqwat-i]
 truly-you F.SG. tired-F-NOM exhausted-F-NOM the-strength-GEN
 "Truly you are tired and exhausted in the strength." (C39)
- 54.a * ʔinna-ki mutcab-at-un [manhuuk-at-u qwat-i ʔal-jism-i]
- 55.a ʔaz-zuhur-u [ʔal-wardiyy-at-u ʔal-lawn-i]
 the-flowers-NOM the-rosy-F-NOM the-colour-GEN
 "the flowers rosy in colour."
- 55.b * ʔaz-zuhur-u [ʔal-wardiyy-at-u lawn-i ʔal-waraq-i]
 the-flowers-NOM the-rosy-F-NOM the-colour-GEN the-leaves-GEN

Recursiveness appears to be quite free in such phrases of "real" annexation, i.e. noun construct phrases. Syntactically there is no limit to the number of elements that can be embedded. The restrictions, if any, are rather semantic in nature. However, it must be emphasized that stylistically any phrase which includes more than four elements is considered bad style in spite of the fact that there is nothing syntactically or semantically wrong with it. That is, no constraints or rules are violated except perhaps the rules of good taste if such a rule can ever be identified. Thus, a phrase like (51.a) above is syntactically and semantically acceptable but would be avoided by people who are much concerned about their good taste. In example (51.a) the genitive case is assigned to every member in the construct phrase except the head which due to its position as "object" is assigned the accusative case. Each of the genitive nouns is embedded in the preceding one, noticing that the final noun, *ʔas-sallat-i* "the basket", takes the definite article since if it does not the result is unacceptable. The example does not break any of the syntactic or semantic rules of Arabic, but usually the number of embedded nouns is less than that presented in (51.a). In (51.b) there is only one embedded noun and the example, according to good taste, is better. Similarly in (52.a) there are four embedded nouns which occur in the genitive case. The underlined noun which is the second member in the bracketed phrase has three embedded following nouns : *quwwaat-i caaSifat-i ʔaS-SaHraa?-i*. However, unlike (51), in (52) the

first member in the bracketed phrase is the active participle *munaZZim-iin* "organizing". Like the last embedded noun in (51), the last embedded noun in (52) takes the definite article, a characteristic feature for nominal construct phrases. Therefore, in construct phrases when the first member is a noun or an active participle recursiveness is possible. Moreover, like the nominal recursiveness active participle recursiveness allows more than three embedded nouns which occur in the genitive.

However, Simple, passive and denominal adjectives are different since they do not allow recursiveness at all. In the (a) examples of (53-55) there is an adjective occurring first in the construct phrase and followed by a genitive noun. In (53.a) the Simple adjective *raa?ic-at-u* "wonderful" occurs in the first position of the bracketed phrase followed by the genitive noun *?al-jamaal-i* "the beauty". However, when this construct phrase is increased by adding just one embedded noun the result is unacceptable. Therefore, example (53.b) is ruled out. Similarly in (54-55), there is an adjective (passive and denominal, respectively) followed by the second member. But when their construct phrases are changed by embedding another following noun the result is unacceptable. Therefore examples (54.b) and (55.b) are ruled out. The conclusion we draw from this is that Simple, passive and denominal adjectives do not allow recursiveness even when this involves just a single noun. Consequently nouns and active participles are similar since they allow recursiveness whereas Simple, passive and denominal adjectives do not.

The features of nouns and adjectives occurring as first members in the construct phrase can be summarized in the following Table :

Characteristic Features of the Construct Phrase					
Characteristic Features of The Construct Phrase	Nouns	Active Part.	Simple	Passive Part.	Denominal
sense of "possession"	+	-	-	-	-
Paraphrasable by the preposition <i>li</i>	+	-	-	-	-
the first member can take <i>?al-</i>	-	+	+	+	+
allows recursiveness in the construct	+	+	-	-	-
the members cannot be separated	+	-	+	+	+
the second member can take the accusative case	-	+	-	-	-
the first member can take the final <i>-n</i>	-	+	-	-	-
the second member is the semantic object	-	+	-	+	-

Table (7)

The above Table shows that adjectives differ from nouns, since they do not admit the meaning of "possession", cannot be paraphrased by the preposition *li* "for", do not allow recursiveness (except active Participials) and can take the definite article. It also shows that the active Participial adjectives do not conform with our definition of the adjectival construct phrase since they differ from the other three types, which constitute the most frequent examples in the data, with respect to the following :

- a. Active Participials can take nunation.
- b. The noun following the active Participial adjective can take the accusative case.
- c. The active Participial construct phrase allows recursiveness and separation of the two members in the construct phrase.

2.4 Concluding Remarks :

This Chapter discusses the prototype theory and shows its usefulness in accounting in a unified analysis for the various types of Arabic adjectives. It also shows that the category members do not enjoy an equal status and some members may be better exemplars of a category than others. Moreover, the categories gradually differ from the prototype, rather than discretely, with those sharing more features with the prototype being placed closer than those sharing less features. Arabic adjectives are divided according to morphological, syntactic and semantic criteria into central (Simple) and peripheral (Participial and denominal). While central members have all the characteristic features of prototypical adjectives, peripheral members have some of these features.

Discussion of the construct phrase shows that Arabic adjectives are different from nouns since they do not take the definite article, cannot be paraphrased by the preposition *li* "for", do not allow recursiveness, nor do they indicate possession. These differences are clear evidence for the separation of the adjective class from nouns.

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- 1 It is not our aim to prove or disprove this theory. The characteristics related to the concept of fuzzy-edges can be used to account for the behaviour of Arabic peripheral adjectives : participial and denominal. Since they are similar to prototypical adjectives with respect to some features, but different with respect to other features. The prototype theory provides a clear unified explanations to all the members of the class of Arabic adjectives, as will be shown in due course.
 - 2 Such an approach is classical because it goes back to the Greek antiquity, and since it has dominated psychology, philosophy and linguistics (cf. Taylor 1989 : 23).
 - 3 Figures (3-5) are due to Givon (1986).
 - 4 McCawley writes that :

"Parts of speech are much more like biological species than has generally been recognized. Within any part of speech, or any biological species there is a considerable diversity. Parts of speech can be distinguished from one another, just as biological species can be distinguished from one another, in terms of characteristics that are typical for the members of that part of speech (or species) even though none of those properties need be instantiated by all members of the parts of speech (or species)".

In our discussion of the Arabic adjective types it will be obvious how important the notions of prototype and gradience are. It will be discussed that some members are typical while others are less typical.

- 5 Ross (1973) observes that NPs which designate human can undergo the rule of double raising, as shown in (i). While raising moves a constituent from a lower embedded sentence into a higher sentence, the double raising rule involves two such movements.
 - i.a It is likely to be shown that John has cheated ---> John is likely to be shown to have cheated.
 - i.b It is likely to be shown that no headway has been made --> *No headway is likely to be shown to have been made.

Ross observes that his doubly raising rule does not apply to *headway*, which is part of the idiom *make headway*.
- 6 To classify various forms into patterns we will follow Saad (1982). The first consonant in a pattern will be represented by F, the second by C and the third by L, which may be separated by various vowels. For example, the Simple adjective *kabiir* "big" has the pattern /FaCiiL/. That is, the F corresponds to *k*, the C corresponds to *b*, and the L to *r*.
- 7 Quirk et al (1985 :75) remark that "in English the term 'participle' reflects the fact that such a form 'participates' in the features of both of the verb and of the adjective".
- 8 The Hal is translated either as "circumstance" or "situational qualifier", however the former is favoured (cf. Carter 1981 : 369).
- 9 See also Carter (1981 : 369) for similar restriction. Carter describes the Hal and states that "it has the number and gender of its antecedent but is always undefined and

dependent". Carter also observes that the Hal "is not an integral part of the sentence, a feature which is shared by most of the dependent elements".

10 The Hal antecedent is called SaHib ?al-Hal "owner of the circumstance"

11 Sweet (1900 : 115) writes :

"The verbals are intermediate between finite verbs on the one hand and nouns and adjectives on the other. They are incapable of expressing predication, and lose several of the formal distinctions that characterize verbs, namely number, person and mood.[...] They preserve the special functions and meanings of the verbs from which they are formed".

12 Notice that such a discussion can be extended to account for the Arabic denominal adjectives which will be discussed in the following section.

13 A full discussion of these various adjective types is in order in Chapters V and VI.

14 This section is not concerned with the adjective order, for more see Chapter VII.

15 The similarity between English participles and adjectives is noted by Jespersen (1924 : 100) who also observes that Latin participles tend to behave like adjectives (cf. 1924 : 273).

16 Givon (1990 : 501-503) gives the following examples from English :

- (i) a. His destroying the city like this (is a shock).
- b. Her leaving him like that (was unexpected).
- c. Their growing old together (was no surprise).
- (ii) a. The destruction of the city by the enemy.
- b. The city's destruction by the enemy.

Givon notes that the examples in (i) are less disruptive for his case recoverability than (ii) where the subject is marked by the agentive *by*. He also notes that when the more finite to-infinitive occurs, even the subject cannot appear in the genitive. If it is present, it can only be marked by *for ... to* as in (iii).

- (iii) a. for him to destroy the city like this ...
- b. for him to grow old together ...

Givon observes that these facts underscore the existence of a systematic gradation in degree of finiteness among the various non-finite forms of the verbs.

17 A complete discussion of why we include participles with adjectives is in order in Chapter V, particularly in § 5.1.3 and 5.2.

18 We collected 438 different adjectives (participial, Simple and denominal) which occur as first members in the construct phrase. These adjectives have been marked in the data by a following "2Z" and have been identified.

19 It is interesting to note that the order presented in the above examples is Head N1 + A + N2 . Although the adjective seems to modify the following N, i.e.N2, which is not its head, the adjective agrees with its Head, i.e. the preceding N1. In this connection this structure still reflects the general characteristics of Arabic since it is N-A language

(cf. Greenberg 1966). Thus although semantically what is being modified by the adjectives occurring first in the "construct phrase" is the following Noun, the preceding Noun maintains the features of the Head since the adjective must agree with it. This also goes well with the generalization put by Clements (1989 : 47) who states that there are two types of languages and therefore :

- a. If a given language displays strict A-N order, then it will have head-final or right-headed compounds.
- b. If a language displays strict N-A order, it will have head-initial or left-headed compounds."

Therefore, the Arabic adjectives in the "construct phrase" seem to obey generalization (b) above although they do not attribute a "property" to their preceding Head Nouns.

- 20 It must be noted that this aspect of the Arabic grammar is characterized by a great variation as noted by Hasan Vol III (1976 : 296) and by Wright Vol II (1898 : 63).
- 21 It must be note that we encounter more difficulties in translating such examples into English simply because we want to keep them as participles. This is not achieved completely in (21), for instance, where a nominal translation may be better : "the life giver".
- 22 Notice that in Arabic, unlike English, the passive is not formed by the presence of the copula verb. The passive is formed by the modification of the relevant verbal stem. Similarly the passive participle is formed by modifying the active participle form.
- 23 This is the same position we took when we presented Participial adjectives with genitive NP complement as more adjectival than those with accusative NP complement (see Figure 8, above in this Chapter.
- 24 This feature is related to recursiveness in the construct phrase which is applicable to nouns as well as to active participles excluding the other types of adjectives.
- 25 There is no example of the denominal adjective, however, they are similar to Simple adjectives with regard to this point.
- 26 This is a typical feature for the construct phrase since the first and the second members constitute a unit.

CHAPTER III
ARABIC ADJECTIVES AS A SEPARATE WORD CLASS :
MORPHOSYNTACTIC EVIDENCE

3. Introduction :

In this chapter we will argue for an independent adjective word class separated from verbs as well as from nouns. Some morphosyntactic evidence will be provided to support this claim, and the traditional Arab grammarian theory of the "parts of speech", which advocates a tripartite system of Verb, Noun and Particle, will be rejected. The traditional inclusion of adjectives with the class of nouns will be discussed and an argument for separating adjectives from nouns will be put forward. The views of some modern linguists supporting the traditional Arab grammarians and the views of those opposing them will be discussed, and the arguments presented here are considered as a continuation of the latter views. The discussion here will explore some of the difficulties in the argument against the tripartite system of word classes, and in particular against the inclusion of nouns and adjectives in the same class. Some important morphosyntactic features, not considered by others, will be taken into account.

It is generally believed in the traditional grammar books that adjectives and nouns inflect similarly for the same grammatical categories viz gender, number, case and definiteness. This constitutes one of the main reasons for considering adjectives as nouns included in the same class. Therefore, we will study these categories in order to find whether adjectives differ from nouns with respect to gender, number and definiteness.

It will be argued that, although nouns and adjectives are similar in taking gender, number and definiteness, these morphological categories are indicated in different ways. While gender in adjectives is indicated by different suffixes, it is inherent for nouns. Therefore, the adjective gender is obvious from inspection, whereas the noun gender is not. Moreover, typical nouns take what is called Broken plural "irregular Pl.", which involves modification of the relevant stem, while typical adjectives take both Broken and Sound plurals. However, Sound plural (cf. regular plural), which does not involve modification of the relevant stem but rather the addition of one of a set of suffixes, is predominant for adjectives. Thus the adjectives *qaṣīr* "dirty" and *Haṣīr* "careful" take the suffixes *-uun* or *-iin* when modifying a M. Pl. head noun in the nominative or accusative/genitive respectively : *qaṣīr-uun*, *Haṣīr-uun* or *qaṣīr-iin*, *Haṣīr-iin*.. On the

other hand, canonical nouns pluralize in many different unpredictable ways by modifying the stem of the relevant noun, e.g., *kabid* /*?akbaad* "liver/Pl." or *kitaab* /*kutub* "book/Pl.". Such a morphological distinction in number provides further support in distinguishing between nouns and adjectives particularly Peripheral, i.e. Participial and Denominal, which take Sound plural. On the other hand, although many central adjectives (Simple) pluralize in Sound Pl., there is a considerable number which take Broken Pl. Therefore, there are adjectives and nouns which take the same type of plural, viz Broken.

Therefore, it is important to consider the types of adjective Broken plural patterns. But because the occurrence of the Simple adjective Broken plural in the data is very rare we checked in the dictionary the possible Broken Pl. for each Simple adjective occurring in our data. These possible Broken plurals and the few which actually occur in our data are put in different patterns in order to compare them with the noun Broken plural patterns. A closer look at these patterns reveals that adjectives and nouns differ with respect to the types of Broken plural patterns they take. While the Iambic plural pattern is typical for nouns, since they have 12 Iambic plural. patterns, it is not typical for adjectives. Adjectives and nouns share only two Iambic Broken plural patterns which constitute only 23 percent of the adjective Broken Pl (which are not actually occurring in the data but correspond to the singular adjectives occurring in our data). Another important difference relates to the plural of Simple adjectives of "colour" and "defects" such as *?aHmar/Humr* "red/PL.", *?aslac/Sulc* "bald/PL." which is restricted to adjectives only excluding nouns.

Although both nouns and adjectives take the definite article *?al-* "the", e.g., *?al-kitaab* "the book" and *?ar-rajul ?aT-Tayyib* "the nice man", they differ with respect to certain structures such as the Construct Phrase (see Chapter II). In this structure both nouns and adjectives can occur whereas Verbs and Particles are excluded. However, nouns cannot take the definite article whereas adjectives can, thus the unacceptability of (1.b) :

- 1.a *kitaabu ?al-walad-i*
 book the-boy-GEN
 "The boy's book"
- 1.b **?al-kitaabu ?al-walad-i*

- 1.c ?aT-Tayyibu ?alxuluq-i
 the-nice manner-GEN
 "The nice in manners ..."
- 1.d Tayyibu ?al-xuluq-i
 nice the-manner-GEN
 "Nice in manners ..."

Such a structure is not rare since it occurs in our data in 438 different examples. Other differences in this structure were noted in Chapter II.

It will be concluded that although Arabic adjectives and nouns share some characteristics, the features which they do not share outweigh. Moreover, even the features they share are applied to adjectives with more restriction. Therefore, it will be concluded that since Arabic adjectives are different from nouns morphologically, they must be assigned to a different word class separate from nouns since they constitute an open class.

3.1 Word Classes :

Word classes are essential for an adequate description of natural language. We need to provide labels for the different kinds of elements like verbs, nouns, adjectives etc which simplify our description of the language (cf. Gleason 1955 : 93). This is summarized by Palmer (1971 : 62) who states that :

"It is however quite impossible to write a grammar of a language without setting up word classes. For not only will the grammar be stated largely in terms of the function of classes of words, but it is essential to indicate in the dictionary precisely how a word functions in the language, and this is done by indicating its class."

Thus, it is important to make statements about the grammatical relationships and restrictions exercised by groups of items upon each other than by individual items, for only in this way can one successfully achieve any notion of generality. Thus the division of words into word classes is essential in any grammar. Let us see how the traditional grammarians, particularly the Arab did that.

3.1.1 The Traditional Grammarians :

Members of the Indo-European group of languages have been analyzed into "parts of speech". According to traditional grammars there are eight parts of speech : Nouns, Pronouns, Adjectives, Verbs, Prepositions, Conjunctions, Adverbs and Interjections. The classification of words into various classes goes back to the Greek philosophers Plato and Aristotle, though the first really clear statement comes from the Greek grammarian Dionysius Thrax (100 B.C.) (Michael 1970 : 53). The noun, for example, is defined as "the name of a person or a thing". There are, however objections to this traditional classification. The above definition given for nouns is vague. How do we know what a thing is ? Is love a thing ? Is hope? Furthermore the definition of the 'Parts of speech' given by the traditional grammarians is circular (cf. Lyons 1968 : 318)¹. Thus the notional criteria of 'parts of speech' fail to provide an adequate basis for establishing word classes. On the other hand, grammatical criteria based on word distribution and morphological paradigms are not open to similar objections (cf. Schachter 1985 : 3). However, this should not suggest the exclusion of semantics completely. It is true that notional criteria can not be used to establish the word classes of a language because the semantic definition of the parts of speech must presuppose the identifications of word classes (cf. Lyons 1977 : 440)².

However it is a different matter when it comes to giving a label to a class since it is true that the formally defined class of nouns, for instance, includes many items which indicate 'person' or 'thing'. Thus "the question of naming a class is a different matter from the formal establishment of a class (which ignores such criteria)" (cf. Brown and Miller 1980 : 234). Although the familiar notional definition of nouns stated above does not always provide an adequate basis for deciding whether or not a certain word is a noun, once the words of a language have been assigned to different word classes on grammatical basis and it is found that one of these classes includes words which are names of persons, places or things, then it is completely reasonable to call this class the class of nouns (cf. Lyons 1968 : 317-319)³.

A more reliable account of word classes, which we will adopt, is provided by

Robins (1964 : 227) according to which each word class is established on "syntactic behaviour supplemented and reinforced by differences of morphological paradigms, so that every word in a language is a member of a word class".

In the traditional Arabic linguistics there are two methods of classifications of *?ajzaa? al-kalaam* "parts of speech" suggested by the traditional Arab grammarians (TAG). One is purely morphological which is called "descriptive" and the other is called *caqlii* "rational". Both methods provide the same result, i.e. the tripartite division of the 'parts of speech' viz : Verb-Noun-Particle. In their classification the TAG distinguished three 'parts of speech' : *?ism* "noun" *fi'cl* "Verb" *Harf* "Particle". This three-fold classification was first enunciated by the Caliph Ali bin Abi Taalib (Weiss 1976). Michael (1970 : 53) asserts, in a footnote quoting Hitti, P.K. *The Arabs* 7th ed. 1960 P. 241, that "According to the famous biographer Ibn-khallikan it was Ali who laid down this Principle : The parts of speech are three - noun, verb and particle, and told him to found a complete treatise thereon"⁴. Thus according to both methods adjectives are not assigned to a separate word class. Moreover, they are included with nouns on the basis of some morphological similarities.

The *caqlii* "rational" method does not depend on the grammatical criteria used to set up word classes. The term rational as noted by Weiss (1976) indicates that the method is non-empirical; it relies rather upon categories arising from pure reflection which admits no further categories. Weiss sums up this method as follows :

1. The noun signifies a meaning for its own sake and for this reason stands for itself as a totally self-sufficient unit of significance "*mustaqil bi-l-mafhumiyy* .
2. The particle is just the opposite : it signifies a meaning, not for its own sake, but as an element <in something else> "*fii gayrihi*" and therefore has significance only within a context, that is to say, only when adjoined to other words.
3. The verb as it were straddles the fence separating the noun from the particle. It signifies part *juz?* of its meaning <in something else>; accordingly it is, like the noun, an independent unit of significance with respect to the other part of its meaning, but with respect to others is, like the particle, dependent upon the verbal context. Since dependence cancels out independence, the verb is said to be dependent upon the verbal context with respect to its total meaning considered as a single entity."

Clearly the rational method emphasizes the tripartite system and offers no separate word class for the Arabic adjectives. Since the "rational" method is nonempirical, as noted by Weiss (1976), it will not be discussed any further. The descriptive method, on the other hand, is different since it employs the morphological differences between words. According to this method the Arabic words are divided into three different word classes : Verbs, Nouns and Particles⁵. The traditional Arab grammarians not only included adjectives with nouns but also in their analysis they sometime fail to distinguish between nouns and adjectives. This is reflected, for example, in their definition for predicates. Ezzat (1975 : 47), for instance, observes the discrepancy in the traditional grammar books with respect to the definition of the predicate, and states that :

"there arises the problem of the definition of predicate (?alxabar) in traditional grammar books. According to these books, the predicate might be : (a) a noun (b) a sentence (nominal or verbal) and (c) a semi or quasi sentence"

What concerns us here is type (a) which is exemplified by Ezzat as follows :

- 2.a ?aJ-jitaa?-u qaariS-un
 the-winter-NOM severe-NOM
 "The winter is severe."
 2.b haða ?al-kaatib-u macruuf-un
 this the-writer-NOM known-NOM
 "This writer is known."
 2.c ?an-niil-u caZiim-un
 the-Nile-NOM great-NOM
 "The Nile is great."
 2.d. ?ar-rfiiq-u mubtahij-un
 the-comrade-NOM rejoiced-NOM
 "The comrade is rejoiced."

Ezzat (1975 : 48) remarks that the above definition is not correct since it ignores adjectives such as the underlined ones in (2). He states that on formal grounds, this definition is not wholly accurate. First, words like *qaariS*, *macruuf* and *mubtahij* are not

nouns, they are adjectives. Therefore, Ezzat suggests a redefinition of the nominal sentence predicate in order to include adjectives. This clearly shows that although the class of adjectives is recognized and included with nouns, the analysis of Arabic adjectives is not always consistent since the distinction between nouns and adjectives is ignored.

The Verb-Noun-Particle classification is adopted by well-known traditional grammarians such as Zajaaji (died 917) in his book *Al-jumal* "The Sentences", Ibn Maalik (died 1274) in his book *Al-alfiya* "The Thousand Verses" (1966 : 21) and Sibawayhi (died 793) in his book *Al-kitaab* "The Book", who simply admits the tripartite division illustrating it with examples without specifying the characteristic of each (cf. Owens 1988 : 125). The three-fold system remains in practice till today. Thus the traditional grammar books treat adjectives, pronouns, demonstratives, relative pronouns, numerals, and quantifiers under the same lexical class of nouns. These different classes included under nouns will reveal clear differences rather than similarities to each other under a thorough analysis. This is exactly the position taken by Owens (1988 : 130) who observes that :

"Morphological, syntactic and semantic criteria were also used to define sub-classes. I will not go into great detail here, because under the careful examination of the Arabic grammarians the three individual word classes became perhaps more notable for **their internal differences** than for their coherency as classes (emphasis mine)."

Thus the traditional Arab grammarians followed by some modern linguists recommend a tripartite system. For instance the traditional Arab grammarian Al-jurjaani (died 1051) in his book *Al-jumal fi An-naHw* "The Sentences in Syntax" (annotated by Al-murSafi (1988 : 28) follows a tripartite system in his analysis of the Arabic words. Al-jurjaani divides the Arabic words into : nouns, verbs and particles. He establishes morphological and syntactic criteria and gives the following examples :

1. nouns are nunated (i.e. attached by the final -n) as in *zayd-in* "Zayd"
2. nouns are prefixed by the definite article as in *?ar-rajul* "the man"
3. nouns take a genitive suffix as in *bi zayd-in* "with Zayd"
4. nouns can be subjects for which a predicate is stated as in *xaraja zayd-un* "Zayd went".

Adjectives are described to have these four features and are therefore included with nouns⁶. Several modern Arabic grammars, written in English and in Arabic, still advocate the three-fold system ignoring the possibility of adjectives as a separate word class. Let us sum up the argument of those who support the tripartite system and do not assign adjectives to a separate word class. For instance, the following are examples of grammar books in Arabic and in English in which adjectives are included with nouns : Hasan (1976 : 26), Al-FaDli (1988 : 10), Ziadeh and Winder (1966 : 22), Nasr (1967 : 107), Lansing (1891 : 77-90), Palmer (1874 : 139-149), Wright (1896 Vol :106), Beeston (1970 : 34) and Bateson (1967 : 9).

Bateson (1967 : 9), for example, includes the class of adjectives with nouns and states that "the Arab grammarians have traditionally dealt with Arabic in terms of only three classes of words : nouns, verbs and particles. This analysis will be retained here [...] Adjectives are not formally distinct from nouns, and there is no separate class of adverbs." Similar views are expressed by Beeston (1970 : 34) who remarks that "since substantives and adjectives are distinguishable only by function, not by morphological shape [...] I am therefore obliged at times to use the expression 'noun' to cover both substantives and adjectives". It would have been useful if Beeston had observed that adjectives constitute a separate class as he has stated a class for verbs. His criterion of identifying verbs as a class can be seen with regard to adjectives. To quote,

"it may be impossible when quoting a word out of context to assert that it is either one or the other, this being determined only by the syntactic context". (Beeston : 34)

"verbs, are principally identifiable as such by their morphological shape, since the functions which they embody can be performed by words other than verbs" (cf. Beeston : 31)

Beeston cites as an example the word *caadil* "just" and remarks that it is impossible without a sentence to say whether it is a noun or an adjective. He excludes morphological shapes as being identificatory criterion of adjectives, while admitting morphological shapes for verbs. But this postulation of excluding morphological aspects for identifying an

adjective can also be considered with verbs. That is, verbs are also subject to Beeston's argument. It is true that the lexical class of a word is identified in context. But it is also true that if one takes a word out of context, one cannot say whether it is a verb or a noun :

a	yaziidu	verb	yaziidu ? <i>alhawaa</i> ?u "The air increases."
		noun	jaa?a yaziidu "Yaziid came."
b	yacmur	verb	yacmuru ? <i>al-malcabu</i> "The stadium is peopled."
		noun	jaa?a yacmuru "Yacmuru came."
c	Sammar	verb	jammarra ? <i>awbahu</i>
		noun	waSala ? <i>ila jammara</i> "He arrived to Shammar."
d	jalaa	verb	jalaa bi ? <i>al-Hajari</i> "He cleaned with the stone"
		noun	?ana ? <i>ibnu jalaa</i> "I am the son of Jalaa"

Thus we come to a particular situation in Arabic, as exemplified above, where a word can be either verb or noun. Thus it can be stated that such marginal uses cannot be taken as a basis to the claim that adjectives in Arabic cannot be identified morphologically.

Similarly Nasr (1967 : 107) states that the Arabic adjectives are 'misnamed' since they are nouns sharing the same characteristics with respect to gender number case and definiteness (cf. Nasr 1967 : 107)⁷. Carter (1981 : 53 and 241) seems to admit that adjectives and nouns in Arabic have different functions, however, he emphasizes the morphological similarities. He also appeals to the fact that the adjective and noun functions do not overlap (1981 : 249), and adds that some patterns are restricted to nouns and are excluded by adjectives. Taking these further facts into account, he (1981 : 249) states that "(a) all adjectives may function as nouns, but it is not clear how essential it is to assume an elided antecedent in every case; (b) some nouns never function as adjectives in particular those of an exclusively nominal pattern such as the verbal noun : this appears to be the only class in which there are no adjectives of the same pattern".

Although Carter seems to be aware of the differences between Arabic nouns and adjectives with respect to their different functions, and of patterns restricted to nouns, he

emphasizes their morphological similarities. This is exactly the same position taken by Bateson. Although Bateson in her analysis of Arabic does not postulate a separate word class for adjectives, as we quoted above, she clearly contradicts herself when she later states that an adjective word class is possible on the ground of Sound plural "regular Pl." vs Broken plural "irregular Pl."⁸ Thus according to Bateson, Arabic adjectives can be assigned to a separate word class on the ground of morphological criteria, the same criteria according to which adjectives are grouped with nouns by Bateson herself, by some other modern linguists, and by the traditional Arab grammarians. However, Bateson chooses to follow the traditional Arab grammarians in classifying adjectives as nouns.

It will be argued that these claims are not adequate since although adjectives and nouns have some similarities their differences outweigh. The earlier grammarians simply assumed the three-fold system without specifying the characteristic of each. However, among later grammarians consideration was given to identify their properties (cf. Owens (1988 : 125). But a close look at these three classes will reveal that they do not constitute coherent ones since they are characterized by internal differences rather than similarities⁹.

Note that Owens invokes the TAG criterion of substitutability : if it is found that adjectives and nouns are mutually substitutable in different structures, they belong to the same category¹⁰. But there are many different structures in which adjectives cannot substitute for nouns, and there are other structures in which nouns cannot substitute for adjectives, as we will see in Chapter IV. Notice that Owens (1988 : 129) found himself forced to admit that "the criteria work in the clear cases, there are on the one hand sub-classes of items they do not work for".

It must be noted that Arabic adjectives inflect for gender, number, case and definiteness, agreeing with the modified head noun, which generally takes the same grammatical categories. Thus, according to the TAG, nouns and adjective are similar with respect to these agreement features, therefore it is wrongly concluded, by the TAG and by some modern linguists, that adjectives have no separate word class¹¹.

To sum up it has been shown that there are some scholars who consider adjectives and nouns as indistinguishable morphologically, and must, therefore, be included with nouns.

However, even those linguists who do not recognize a separate word class of adjectives in Arabic, suggest that they are different from nouns with respect to their functions and with respect to some morphological characteristics related to gender and number, as noted by Bateson. Moreover, the categories as presented in the traditional tripartite system, under careful examination reveal clear internal differences rather than similarities. That is, the TAG criteria lead to the recognition of a separate class of adjectives in Arabic.

It also has been shown that neither the traditional Arab grammarians nor some of the modern linguists supporting their views assigned a separate word class for the Arabic adjectives. On the contrary, adjectives are included with the noun category, a category which also includes numerals, demonstratives, pronouns, and relative pronouns. The basis for this seems to be the morphological similarities and the test of substitutability. It is claimed that both nouns and adjectives have the following characteristics :

1. They are nunated.
2. They take the definite article.
3. They take the genitive case.
4. They substitute for each other since they can occur in subject position.

In Chapter IV we will see how the feature in (4) is related to Arabic adjectives. In Chapter II it is argued that nouns in the "construct phrase" neither take the definite article nor nunation. On the other hand, adjectives occurring in the same structure can take these two features, therefore the distribution of Arabic nouns is different from that of Arabic adjectives. With respect to the adjective occurrence in subject position, it will be argued in §4.2 that such occurrence is restricted to those which are definite, refer to human beings, and are plural, as opposed to nouns occurring in the same position which are not required to have these three features. Furthermore, statistical evidence will be put forward to support the claim that adjectives mainly do not occur in subject position (see §4.2).

3.1.2 Advocates of a Separate Adjective Word Class :

In the previous section we noted that there are some grammarians in modern linguistics who followed the tripartite system set up by the TAG. We also noted that such linguists do not assign a separate word class for the Arabic adjectives. In this section we will discuss the arguments of those who reject the TAG tripartite system and provide evidence that adjectives and nouns must be assigned to two different word classes. We support such a position, therefore we will provide different evidence demonstrating that nouns and adjectives are two separate word classes, therefore, adjectives must be assigned to a separate word class. We will cite Aniis (1978), Ezzat (1975), Kenawy (1982), Al-HuSari (1958), and Hassaan (1985) who argue for a separate adjective word class.

Aniis (1978 : 280), for instance, states explicitly that the definitions given by the traditional Arab grammarians for the three word classes are not criterial and therefore, it is possible to find words which are wrongly identified. He also remarks that there are three different factors that must be taken into consideration when deciding the word classes of a language : meaning, morphological shape, and the syntactic functions. Therefore Aniis finds it difficult to accept the traditional tripartite system in which adjectives are included with nouns. In a short paragraph Aniis (1978 : 290) distinguishes between nouns and adjectives with respect to the following two features :

1. Adjectives always follow their modified head nouns.
2. Each adjective has a feminine and masculine form as opposed to nouns which occur in one gender.

Thus according to Aniis Arabic adjectives and nouns must be assigned to different word classes although they are similar with respect to some other features. Similarly Ezzat (1975 : 48) distinguished between nouns and adjectives and observes that contrary to the traditional grammar books "words like *qaariS* 'sever', *macruuf* 'known', *caZiim* 'great' and *mubtahij* 'rejoiced' are not nouns, they are adjectives." Kenawy (1982) studies modification in Classical Arabic including deictics, relative clauses, adjectives, quantifiers and numerals. In a very short section Kenawy (1982 : 368-371) notes the difference between adjectives and nouns and summarizes it in the comparative and superlative use of

adjectives, modification by intensifiers and occurrence as predicates, e.g. *Zaydun faqiirun* "Zayd is poor" but not **?al-faqiiru zaydun* "the poor Zayd". Kenawy (1982 : 370) also criticizes Beeston (1970 : 34) for including adjectives and nouns together on the basis of functional rather than morphological criteria, different words can have the same function. Kenawy ends his discussion on the difference between adjectives and nouns by "assuming" such a difference without investigating how adjectives and nouns are morphologically different. Clearly this is because Kenawy's study does not focus on adjectives, but rather, treats it as one, of the many other, aspects of modification in the noun phrase.

On the other hand, Stetkevych (1970 : 80) observes that the revision of the Arabic methodologies and grammatical categories was suggested, by some linguists, such as SaaTic Al-HuSarii. Later Stetkevych (1970 : 81) mentions what SaaTic Al-HuSari would do :

"He would like to apply the method and logic of Western philology to Arabic grammar. For example, he would abolish the traditional division of words into nouns, verbs and particles and, instead, adopt the classical Western system . **He would separate from the traditional Arabic concept of noun (?ism) the adjective** (emphasis mine), the pronoun, the infinitive (maSdar) and the participles, establishing the adjective and the pronoun independently."

This clearly shows the realization of some modern linguists as early as 1958 when SaaTic Al-Husari calls for the modernization of the Arabic grammar and the separation of adjectives from the noun class. Such a call was answered in the pioneer work by Prof. Hassaan (1985) in his book *Al-luga Al-carabiay : macnaaha wa mabnaaha* "The Arabic Language : Meaning and Form". Hassaan provides a very elaborate account for the different word classes in Arabic. His scheme is discussed below.

3.1.3 Hassaan's Account Of Arabic Adjectives :

The most elaborate system advocating a separate word class for Arabic adjectives distinguishing between Arabic adjectives and nouns is the one suggested by T. Hassaan (1985 : 86-118). To decide the word class of an item Hassaan (1985 : 88), like Anis (1978), considers the relevant form, meaning and syntactic function. Hassaan (1985 : 86-103) reconsiders the tripartite system arguing for a separate word class for Arabic adjectives. He asserts that Arabic adjectives are different from both verbs and nouns, therefore they must be assigned to a separate word class. His main argument with respect to adjectives can be summarized in the following three points :

i. Adjectives and nouns share some of the morphological and syntactic features since they take the definite article, inflect for different cases, occur in the vocative structure and occur as *musnad ?ilayhi* "subject". Hassaan (1985 : 102) also remarks that adjectives and verbs share some of the characteristic features since they can take object arguments, and can occur as *musnad* "predicate". Thus the adjective similarities to verbs show that it differs from nouns and the adjective similarities to nouns show that it differs from verbs; therefore, it must be assigned to a separate word class.

ii. Hassaan observes that with respect to tense adjectives are different from verbs since they do not inflect morphologically for different tenses. He also notes that adjectives, i.e. participles, are different from nouns since they can accept different time adverbs.

iii. Hassaan (1985 : 100) also states that Arabic adjectives occur in different patterns which are also shared by nouns as follows :

Noun And Adjective Patterns

Patterns	Adjectives	Gloss	Nouns	Gloss
1. FaCL	sahl	"easy"	fals	"currency"
2. FaCaL	Hasan	"nice"	faras	"horses"
3. FaCiL	Haðir	"careful"	kabid	"liver"
4. FaCuL	yaquZ	"alert"	caDud	"arm"
5. FiCL	niks	"relapsed"	cijl	"calf"
6. FiCaL	qiyam	"precious"	cinab	"grapes"
7. FiCiL	?ibid	"fertile"	?ibil	"camels"
8. FuCL	Hulw	"sweet"	qufl	"lock"
9. FuCaL	HuTam	"smashed"	culab	"boxes"
10. FuCuL	junub	"impure"	cunuq	"neck"

Table (1)

Table (1) shows that adjectives and nouns share the same pattern. Thus, for instance, the adjective in (2) *Hasan* "nice" and the noun *faras* "horse" have the same pattern namely /FaCaL/. Similarly the other adjectives presented in Table (1) above share the same pattern with nouns. However, Hassaan states that if a form shares the same pattern with an adjective, i.e. if it has the same simple pattern, then we can consider its *?ilSaaq* "affixation" and *taSriif* "derivation". Such consideration will reveal that adjectives and nouns are different. He adds that the relevant form is an adjective, if it has the following derivatives :

A. Having a corresponding verb

1. perfect verb
2. Imperfect verb
3. Imperative

B. Having a corresponding Participle

1. active participle
2. passive participle

C. Having a corresponding comparative form

Thus according to Hassaan, although *fals* "currency" and *sahl* "easy", for instance, share the same pattern of /FaCL/, the former is a noun since it does not have any of the above formatives in (A-C), whereas the latter is an adjective since it has a corresponding formative for each of the above criterion in (A-C). Thus *sahl* "easy" is an adjective since it has the following corresponding formatives :

- 1. Perfect *sahula* "became easy"
- 2. Imperfect *yashulu* "become easy"
- 3. Comparative *?a-shal* "easier"

Therefore *sahl* "easy" is an adjective, as opposed to *fals* "currency" which is a noun. Examples of other similar nouns, which cannot have corresponding formatives as presented in (A-C) are as follows :

- ?arD* "earth"
- gurfah* "room"
- balad* "country"

Since these forms have no corresponding verbs, and therefore have no corresponding active or passive participle, nor they have corresponding comparative forms, they are considered by Hassaan as nouns.

Moreover, Hassaan (1985 : 101) tried to distinguish between nouns, verbs and adjectives by using three different criteria : *?ilSaaq* , *TaSriif* and *?isnaad* which he glosses to Arabic as "Morphological Scatter", "Conjugation Table" and "Predication Table" respectively (cf. Hassan 1985 : 93). He represents his scheme as follows:

<i>?ilSaaq</i>	<i>taSriif</i>	<i>?isnaad</i>
NOUNS	-----	-----
ADJECTIVES	ADJECTIVES	-----
VERBS	VERBS	VERBS

Table (2)

The above Table clearly shows, as Hassaan himself notes, that nouns do not participate in *taSriif* or in *?isnaad*, that is nouns generally do not have the corresponding formatives presented above in (A-C) nor can they occur in *?isnaad* i.e. as predicates. Hassaan concludes that adjectives are distinguished from nouns and verbs, therefore they must be assigned to a separate word class.

Since nouns cannot take the comparative form Hassaan's criterion in (C) is very important. Moreover, the suggestion that the predicative occurrence is mainly for verbs is welcomed, although adjectives can occur predicatively as well.

3.1.4 Difficulties With Hassaan's Account

Although Hassaan provides an elaborate argument for a separate adjective class some additional points can be made.

I. It is suggested by Hassaan that if a noun and an adjective share the same pattern then we can consider whether verbal, participial or comparative forms can be derived.

However, since adjectives, nouns, and verbs have such corresponding derived forms, this criterion does not distinguish the three classes unless they are correlated with the criterion in (c), namely having a corresponding comparative form. But notice that the participial adjectives do not yield the comparative forms. However, Hassaan seems to give equal importance to (A) and (B) on one hand, and (C) on the other.

Although Hassaan's analysis is applicable to many nouns it is not applicable to all. A noun like *naqd* "criticism", for example, can have different related formatives as in the following :

According to criterion (A) :

- | | | |
|---------------|----------------|-----------------|
| 1. Perfect : | <i>naqada</i> | "he criticized" |
| 2. Imperfect | <i>yanqudu</i> | "he criticizes" |
| 3. Imperative | <i>?inqud</i> | "criticize! " |

According to criterion (B) :

- | | | |
|-----------------|----------------|---------------|
| 4. Active Part | <i>naaqid</i> | "criticizing" |
| 5. Passive Part | <i>manquud</i> | "criticized" |

Thus although the noun *naqd* "criticism" has more corresponding formatives than the adjective *sahl* "easy", it cannot be considered an adjective. Such a distinction can be established by using one relevant feature. For example, the distinction between nouns and adjectives can be established on the basis that only adjectives have comparative forms. Thus a noun like *naqd* "criticism" does not have a corresponding comparative, whereas an adjective like *sahl* "easy" does. Thus, although the criteria of having corresponding verbs and participial formatives are relevant, the criterion of having a corresponding comparative form seems to be more important. However, Hassaan seems to be aware of the participial adjectives which do not take the comparative form and which always have corresponding Verbs and participles. Therefore Hassaan puts forward his generalizations in (A) and (B).

But the two generalizations, as we noted above, are not always accurate since there are some nouns which have corresponding verbs and participles. But the matter is not very clear. This is illustrated in Tables (3), which shows the adjectives, both Simple, as in examples (1-2) and Participial, as in examples (3-4), and the nouns, as in examples (5-7).

Adjective And Noun Corresponding Formatives

	1	2 GLOSS	3 VERB FORM I	4 VERB FORM II	5 COMP- ARATIVE	6 ACT PART FORM I	7 PASS PART FORM I	8 ACT PART FORM II	9 PASS PART FORM II
Central	1. baarid	cold	baruda	barrada	?abrad	*	*	mubarrid	mubarrad
Adjectives	2. waasic	wide	wasica	wassaca	?awsac	waasic	*	muwassic	muwassac
Participial	3. kaatib	writing	kataba	kattaba	*	kaatib	maktuub	mukattib	mukattab
Adjectives	4. Haa jiz	holding	Hajaza	Hajjaza	*	Haa jiz	maHjuuz	muHajjiz	muHajjaz
Nouns	5. waadiy	valley	*	*	*	*	*	*	*
	6. Sawt	voice	*	Sawwata	*	*	*	muSawwit	muSawwat
	7. naqd	critique	naqada	naqqada	*	naaqid	manquud	munaaqqid	munaaqqad

Table (3)

Table (3) clearly shows that the adjectives in (1-2) have comparative forms whereas those in (3-4) do not. A quick look at these two sets will reveal that the former contains central adjectives, and the latter participial adjectives. It also shows that the nouns in (5-7) do not have corresponding comparative forms. But notice that because both Participial adjectives and nouns do not have corresponding comparative forms we had to consider other morphological differences between the two. In other words, how are the Participial adjectives in (3-4) different from the nouns in (5-7)?

It is clear that Hassaan draws his generalization in (A) and (B), the derivation of corresponding Verbs and participles, on the basis of "concrete" noun examples such as *waadiy* "valley" in (5), since these nouns have neither corresponding verbs nor corresponding participles. But "abstract" nouns such as *naqd* "critique" in (7) show that such nouns, like the participles in (3-4) do have corresponding verbs and participles. Thus it can explicitly be stated that the generalizations in (A) and (B) apply only to canonical nouns such as the "concrete" noun in (5) as opposed to the "abstract" noun in (7). Clearly

"concrete" nouns have properties related to "size", "shape", and "manipulability" which make them different from "abstract" nouns. But this difference is not mentioned by Hassaan¹².

We can stop there and conclude that the generalizations stated by Hassaan in (A) and (B) are not accurate since there are nouns which have corresponding verbs and participial forms. Moreover, if we want to keep Hassaan's generalizations we have to limit its application to "concrete" nouns.

A further difficulty is that the noun in (6), indeed has the corresponding Form II of the verb and of the participles, but lacks the same correspondences in Form I. That is, what seems to be relevant is Form I rather than any other Form. Hassaan does not differentiate between the various Forms, i.e. in his generalizations in (A) and (B) he does not state what kind of Form an item has. In our description Form I, rather than any unspecified Form, is more relevant because the nouns in (5-6), on one hand, cannot have verb Form I, whereas some can have verb Form II. In contrast, all the adjectives in (1-4) have verb Form II¹³. Thus if we want to keep generalization (A) (having a corresponding verb) we must restrict it in order to exclude nouns such as that in (6). The suggested restriction will be : having a corresponding verb Form I.

Now we turn to the confusing situation, or rather the contradicting facts, presented in the noun examples in (7) in column 1 as opposed to the participial examples in (3-4) in the same column. If we examine these two sets carefully, we will find that the participial adjectives *kaatib* "writing" and *Haajiz* "holding", in bold face, in column 1 are identical to those, in bold face, in column 6. This is because they are active participles. But the problem is that they are similar to the noun pattern, *naaqid* "reviewer", in the same column. In other words, both active participles and nouns share the same form. Therefore, *naaqid* out of context could mean either "criticizing" (participial interpretation) or "reviewer" (noun interpretation). The following are similar examples illustrating the same point :

<i>kaatib</i>	"writer"	or	"writing"
<i>Haajiz</i>	"hindrance"	or	"holding"

<i>naaqid</i>	"reviewer"	or	"criticizing"
<i>Haamil</i>	"porter"	or	"carrying"
<i>caalim</i>	"scholar"	or	"knowing"

These examples show that the active participle forms in bold face in Table (3) can have two interpretations, one nominal, the other participial. Of course this ambiguity is resolved when the relevant form occurs in context. But it is also important to note that even out of context there is a clear difference between these two interpretations which is related to the category of number. The nominal interpretation correlates with the Broken plural (a plural which involves modification of the relevant stem) as opposed to the participial interpretation, which correlates with the Sound plural (a plural which involves the addition of suffixes which does not affect the relevant stem). This can be illustrated as follows :

<i>kaatib</i>	Broken Pl.	<i>kuttaab</i>	"writers"
	Sound Pl.	<i>kaatib-uun</i>	"writing-M.PL."
<i>Haamil</i>	Broken Pl.	<i>Hummaal</i>	"porters"
	Sound Pl.	<i>Haamil-uun</i>	"carrying-M.PL."

Therefore, example (a) below, in which the broken plural form of *kaatib* is the object governed by the preceding verb *ra?ay-* "saw", is acceptable as opposed to the Sound plural in (b) which, unlike that in (a), can not occur as the object. Therefore, (b) is unacceptable.

- a. *ra?ay-tu kuttaaba ?al-qiSSati*
saw-I writers the-story
"I saw the writers of the story".
- b. **ra?ay-tu kaatib-uun ?al-qiSSati*
saw-I writing-M. Pl. the-story
"I saw the writings of the story".

This shows that the plural feature provides important evidence for determining whether an item is or is not a participle. The items in the Broken plural are nouns, while those in the

Sound plural are participles, taking the Sound plural suffix *-uun*. Moreover, participles are generally pluralized according to the Sound plural as opposed to nouns, such as those in Table (3), in (5-6) which pluralize in the Broken plural.

Therefore, although it is true that nouns generally do not have corresponding participial forms, especially "concrete" nouns, as opposed to participial adjectives which, of course, always have corresponding participial forms, it seems that it is also important to use other features, such as number, which provides sufficient evidence to distinguish nouns from participial adjectives, and account for the different interpretations associated with the same form, i.e. nominal vs participial. This fact is not considered by Hassaan. This point will further be discussed in §3.3.

II. Hassaan's criterion of having corresponding verbs is not always accurate. What seems to be relevant is whether a form has a corresponding verb Form I or not. This is because there are many nouns which can have different verb forms but not verb Form I. Even the example cited by Hassaan : *fals* "currency" can have a corresponding verb Form II : *fallas* "to run out of currency (money)". However, it cannot have a corresponding verb Form I : **falasa* . Therefore the criterion of having a corresponding verb, as stated above in (A) must be restricted in order to give satisfactory results. What we suggest is that the criterion in (A) must be : having a corresponding verb Form I, rather than having a corresponding verb. In this way we can exclude many Arabic nouns. For instance, the noun presented in Table (3) example (6), have corresponding verb Form II, however, it does not have a corresponding verb Form I.

III. Hassaan does not differentiate between verbs, nouns and adjectives with respect to *?ilSaaq* "affixation", in Table (2), since they can inflect for gender and number. But what seems to be important is the way in which these two agreement categories inflect. Of course, verbs are different since they take different markings¹⁴. On the other hand, nouns and adjectives are similar since they both indicate the categories for number, case and definiteness. However, the way in which number and gender are marked and the type of pluralization processes in nouns are different from adjectives. Unlike nouns, adjective gender is predictable, and generally assigned by a rule (see §3.2). While canonical nouns

generally take Broken plural, which involve modification of the relevant stem, adjectives particularly participial and denominal generally take Sound plural, which attaches a suffix to the relevant stem (see §3.3). Therefore, the criterion of *ʔilSaaq* "affixation" as presented by Hassaan is not accurate since it should manifest the differences between the relevant classes. A better account is presented by Miller (1985) and by Croft (1984), who indicate the correlation between reference, modification and predication for nouns, adjectives and Verbs respectively (see §4.3.2)

IV. Other criteria not noted by Hassaan are related to the fact that adjectives rather than nouns generally accept modification by *very*. Moreover, the denominal adjective suffix seems to provide evidence as to the distinction between adjectives and nouns since it is not attached to adjectives, i.e. it requires a noun base (see Chapter VI).

To sum up, it has been discussed that some linguists reject the tripartite system and argue for a separate adjective word class. Their argument is based on some morphological differences between the nouns and the adjectives. Moreover, it is also noted that the adjective (participial) similarity to verbs negates its inclusion under the noun class and its similarity to nouns negates its inclusion under the Verb category. But since the Arabic adjective is neither a noun nor a Verb, it must belong to a separate word class.

It is also argued that the generalizations presented by Hassaan in (A) and (B) are not always accurate although the exceptional cases seem to be explained in terms of the type of semantic feature they have, i.e. whether they are "abstract" or "concrete" nouns. A more adequate account is provided by considering the category of number which also accounts for the different interpretations of the same form. It is argued that participial adjectives pluralize according to the Sound plural as opposed to nouns which pluralize according to the Broken plural. This point will be further discussed in §3.3. In §3.2 and §3.3 we shall see how adjectives differ from nouns morphologically with respect to gender and number, respectively.

- 4.f wa hum junuudu-haa ?as-sirriy-uun
and they M. soldiers-her the-secretive-Pl.NOM
"And they are her secretive soldiers." (K7)
- 4.g bi raa?iHat-i ?al-baSal-i ?al-?axDar-i
with smell-GEN the-onions-GEN the-green-GEN
"With the smell of the green onions." (4175)
- 4.h yaraa-ha waaHat-an xaDraa?-a
see-it oasis-ACC green-ACC
"He sees it a green oasis." (5035)
- 4.i Hatta saaqa-ay-hi ?as-saliim-at wa ?al-carjaa?
leg-Dual-his the-undamaged-F. and the-cripple-GEN
"So the fatigue will eat both his undamaged and his cripple legs." (5611)

The underlined items above are adjectives of different types (participial in (4.e), denominal in (4.f) and Simple in the rest) which take different suffixes agreeing with the modified head noun according to the four agreement categories. Thus, for example, the adjective *haadi?-at-un* "quiet F." in (4.a) takes the F. Sg. suffix *-at* since the modified head noun is feminine, whereas the adjective *?al-?aniiq-aat-u* in (4.b) takes the F. Pl. suffix *-aat* (F. Sound Pl) and modifies a feminine plural noun. The underlined adjectives in (4.d) and (4.e) take respectively the genitive/accusative M. Pl suffixes *-iin* and the nominative M.Pl. suffix *-uun* since the corresponding modified head noun is M. Pl. genitive and nominative respectively. The adjective *Haasim-* "decisive" takes the F. Sg-*at*, but modifies a "non-rational" plural head noun. The colour adjectives in (4.g) occurs in the masculine singular and its corresponding feminine singular occurs in (4.h). Similarly the underlined defect adjective in (4.i) can have a corresponding feminine. The three examples show that although colour and defect adjectives do not share the same gender suffixation, they still distinguish formally between masculine vs feminine (see §3.2.1 and §3.2.2 in this Chapter). Arabic adjective inflection for gender, number and case is shown in Table (4) below.

The Adjective system of Gender and Number

Case	Dual		F. Sg. & Non-rational Pl.	Sound Plural	
	F.	M.		M.	F.
Nominative	-ataan/ataa	-aan/-aa	-atun/-atu	-uun/-uu	-aatun/-aatu
Genitive	-atayn/atay	-ayn/-ay	-atin/-ati	-iin/-ii	-aatin/-aati
Accusative	-atayn/atay	-ayn/-ay	-atan/-ata	-iin/-ii	-aatan/-aata

Table (4)

Each form can occur either non-nunated (to the right of the slash) or nunated (to the left of the slash). The Table represents the complete gender and number systems of the Arabic adjectives. The F. Sg. and Non-rational Pl take the same suffix. The Sound plural is associated strongly with participial and denominal adjectives, whereas Simple adjectives show variation between Sound and Broken Pl. The masculine singular is the unmarked form. The occurrence of Arabic adjectives in the data is shown in Table (5) below.

Occurrences of The Adjective in Various Genders And Numbers

	No.of occurrences	Percentage
Sg. F. and non-rational Pl.	2384	26.3
Dual	156	1.7
M. Sound Pl.	69	0.8
F. Sound Pl.	40	0.5
M. Sg.	6367	70.5
Broken plural	20	0.2
Total	9016	

Table (5)

The above suffixes can vary according to different number and case. Table (5) shows that the most frequent "unmarked" form of the Arabic adjective is the masculine singular. Then comes the feminine singular and the non-rational plural. Then come, in decreasing order of frequency, the Dual, the M. Sound Pl., and the F. Sound Pl. The Table also shows that the total number of adjective occurrences is 9016 excluding those which occur in the Broken Pl. In the whole corpus of data only 20 adjectives occur in the Broken Pl., which will be discussed in the following section.

The above discussion shows that Arabic adjective gender is morphologically predictable. Arabic adjectives are derived by predictable morphological processes from a corresponding masculine singular base to which certain suffixes are added¹⁶. Moreover, each Arabic adjective can have two genders M./F, except few inherently masculine or feminine adjectives. In other words, Arabic feminine adjectives are distinguished formally

from their corresponding masculine singular forms.

The gender of an Arabic noun, on the other hand, is not morphologically predictable. Arabic nouns, generally have one gender. Thus the same noun cannot have two genders M./F¹⁷. Although, some nouns take the feminine singular marker *-at*, and their gender is predictable, i.e. they are feminine, such nouns do not have two genders, nor do they show systematic correlation between the base noun and the corresponding derived form. For instance, the nouns *jaziirat* "island", *madiinat* "city" and *macrakat* "battle" require feminine adjectives and end in the sequence *-at*. However, unlike adjectives, they cannot be derived from a corresponding base that does not carry the formative *-at*. Therefore, the corresponding forms are asterisked **jaziir*, **madiin*, **macrak*.

On the other hand, although nouns like *katif* "shoulder" or *?arD* "earth", *cayn* "eye" are not suffixed by any feminine marker, they are feminine since they require feminine adjectives as opposed to other nouns like *xaliif-at* "caliph" or *futuww-at* "racketeer" ending in the feminine *-at*, but requiring masculine adjectives, i.e. they are masculine. This clearly shows that the noun gender is not always determined from the morphological shape.

Moreover, nouns like *bayt* "house", *jabal* "mountain", for example, have only one gender, and other nouns denoting natural distinction between M./F have corresponding unrelated lexical items; thus, *jamal/naaqat* "camel M./F." and *rajul/?imra?-at* "man/woman" rather than : *jamal/*jamal-at* "camel M./*F.", and *rajul/*rajul-at* "man/*F.", respectively. Other types of irregularities are related to some nouns whose gender is predictable from the suffix they take, however, they still show irregularities with respect to the type of the base to which the suffix is attached. Examples of this type are : *fajar/fajar-at* "tree Pl/tree Sg.F." *baqar/baqar-at* "cow Pl/cow F. Sg.". This clearly shows, that the noun base which takes the suffix *-at* is plural, as opposed to the adjective base which is singular.

Such morphological irregularity and unpredictability with respect to the category of gender are characteristics of Arabic nouns. The defining characteristics of gender formation in Arabic nouns, particularly in the core vocabulary of most frequent words, would seem to

be the essential arbitrariness in the assignment of gender formatives. Furthermore, the gender of some nouns which seem to be predictable from the morphological shape, is associated with a semi-productive process since the number of the corresponding base noun is not predictable which suggests that such a process would be associated with derivational rather than inflectional process, of the kind which led Matthews (1974 : 46) to observe that "for the nouns, Gender is in principle inherent in the individual lexemes". The difference between adjective and noun gender is summarized below.

Adjectives

1. All distinguish overtly between masculine vs feminine
2. The stem which takes the suffix *-at* is the masculine singular.
3. Both forms occur in the language, i.e. M. Sg. and F. Sg. Therefore, gender of the relevant form can easily be identified.
4. The suffix *-at* is productive since it can be optionally added to any adjective (except "colour and defect" and comparative).
5. Overtly, gender can also be indicated by modifying the relevant stem as in "colour and defect" adjectives : ?*aHmar* / *Hamraa*? "red M./red F.". Therefore, adjectives have different ways to indicate the category of gender, which suggests that they are unmarked with respect to gender.

Nouns

1. Only a few distinguish overtly between masculine vs feminine
2. The stem which takes the suffix *-at* varies since it can be singular, plural, or noncount.
3. Only one form occurs in the language, except few which are animate, rather than inanimate.
4. The suffix *-at* is not productive since it cannot be optionally added to the majority of nouns.
5. Overtly, gender cannot be indicated by any other way. Therefore nouns represent the marked forms for the category of gender.

In short, the above discussion shows that the gender of Arabic adjectives is predictable. Arabic feminine adjectives are derived from a corresponding singular base according to a complete system of suffixation. Thus each adjective has two genders whereas the noun gender is not predictable since it is assigned arbitrarily. Thus there is a general rule by which the choice of gender for adjectives is determined. However, for nouns it is simply part and parcel of the choice of lexeme (*kacb*, without the feminine suffix *-at*, means "ankle" rather than *kacbat*, which means "the Holy House in Makkah"). All this will be familiar to students of Arabic. Information about the noun gender must be given in the dictionary, however, information about the adjective gender is predictable.

- 6.b haðihi ?as-sacaadat-u ?al-Hamqaa?-u
 this the-happiness-NOM the-stupid-NOM
 "this stupid happiness." (J69)
7. rijaal-un Humq-un
 men-NOM stupidPl.-NOM
 "stupid men".
- 8.a ?aHaaTat bi-hima Hayyat-aan zarqaaw-aan
 surrounded with-them Dual snake-Dual NOM blue-Dual NOM
 "Two blue snakes surrounded both of them". (J237)
- 8.b min ?al-kutub-i ?al-?azhariyy-at-i ?aS-Sfraa?-i
 from the-books-GEN the-Azhar-F-GEN the-yellow-GEN
 "From the Azhar-like yellow books" (J13)

The examples in (5-7) belong to the Simple pattern /?aFCaL/ which includes colour adjectives, as in (5), and defect adjectives as in (6-7) respectively. In each of the (a) examples the underlined adjectives occur in the masculine singular as opposed to the (b) examples in which the corresponding adjectives occur in the feminine singular modifying a feminine head noun. The adjective pattern in the former is /?aFCaL/ and in the latter is /FaCLaa?/. The example in (8.a) shows that these adjectives can take the regular Dual suffixation, and the example (8.b) shows that they, like the Non-rational plural of other adjectives, take the feminine singular for the "non-rational" plural (see 5.c). For example, the colour adjective *-Safraa?* "yellow F." occurs in the feminine singular pattern /FaCLaa?/ and modifies a non-rational plural noun, *-kutub* "books". Thus, while other adjectives take the feminine singular suffix *-at* when modifying a non-rational plural, the colour and defect adjective take the feminine singular /FaCLaa?/ when modifying a non-rational plural. Therefore, both types (regular adjectives and colour and defect adjectives) are consistent in employing the F. Sg. for the "non-rational" plural. (7) occurs in the plural pattern /FuCL/ pattern which is restricted to adjectives excluding nouns, as we will show in due course.

Basic Non-basic Colour Adjectives

Basic	Gloss	Non-basic	Gloss
1. ?aswad	black	1. bunn-iyy	coffee-like (brown)
2. ?abyaD	white	2. banafsaj-iyy	violet-like (purple)
3. ?aHmar	red	3. burtuqaal-iyy	orange-like (orange)
4. ?aSfar	yellow	4. ramaad-iyy	ash-like (grey)
5. ?axDar	green	5. casal-iyy	honey-like
6. ?azraq	blue	6. samaaw-iyy	sky-like (light blue)

Table (6)

The above Table shows that, unlike the basic colour adjectives, the non-basic colour adjectives : *brown*, *purple*, *orange*, *grey* etc. take the denominal suffix *-iyy*, i.e. they are denominal adjectives rather than Simple adjectives. Moreover, these adjectives occur lower in the colour hierarchy. Berlin and Kay (1969) have suggested, from a study of about a hundred languages, that there is a universal hierarchy of colour terms. In languages with just two colour terms there are *black* and *white* ; if there is a third term it is *red* ; the fourth and fifth will be *yellow* and *green* (in either order depending on the language); then *blue*; then *brown* ; then (without ordering) *purple*, *orange*, *grey* . Berlin and Kay (1969 : 104) summarize their result as follows :

"... there exist universally for humans eleven basic perceptual color categories, which serve as the psychological referents of the eleven or fewer basic color terms in any language. Second, in the history of a given language, encoding of perceptual categories into basic color terms follows a fixed partial order.

The two possible orders postulated by Berlin and Kay are illustrated in Figure (1) below :

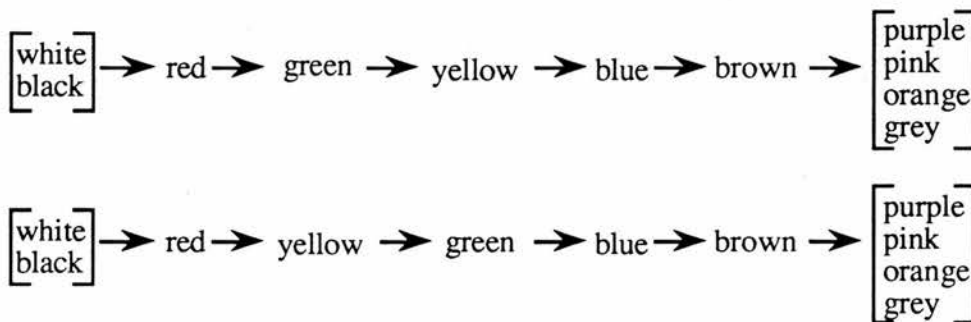


Figure (1)

Figure (1) above shows that in both orders the adjectives : *brown, purple, pink, orange* and *grey* occur lower than the other groups : *white, black, red, yellow, green and blue*. The first set corresponds to the Arabic non-basic colour terms whereas the second corresponds to the basic ones. Moreover, the terms which are high in the hierarchy have corresponding inchoative/causative forms, while the lower ones do not¹⁹. Like the English adjective *black*, for instance, the Arabic adjective *?aswad* "black" has a corresponding inchoative form : *?iswadda* "to become black", and a causative as in *sawwada* "to blacken" ²⁰. Similarly the other basic colour adjectives can have corresponding inchoative/causative. However, the non-basic colour adjectives, which take the denominal suffix *-iyy* , cannot have such correspondences. The difference between the two types is summarized as follows :

The basic colour terms are characterized by the following features :

1. They pluralize according to the Broken plural pattern /FuCL/.
2. They inflect for gender by internal inflection, i.e. by modifying the stem of the corresponding singular form (rather than by attaching the F. Sg. suffix *-at*).
3. They occur higher on the Colour Hierarchy postulated by Berlin and Kay.
4. They have inchoative/causative correspondences .
5. They are marked by the prefix *?a-* .
6. Their feminine singular forms are non-nunated (cf. Bishai 1971 : 102).
7. Each one will have one meaning.

On the other hand, the non-basic colour terms are characterized by the following features :

1. They pluralize according to the Sound plural, when the modified head noun is human, and according to the non-human plural when the modified head noun is non-human.
2. They inflect for gender and take the regular feminine adjective suffix *-at*
3. They are ranked lower in the Colour Hierarchy postulated by Berlin and Kay.
4. They do not have corresponding inchoative/causative.
5. They are marked by the denominal suffix *-iyy* .

6. They accept nunation, like other adjectives, in both M. and F. forms.
7. Each may have various meanings depending on the modified head noun.

3.2.3 The Comparative And The Adjective /ʔaFCaL/

The "Colour" and "Defect" adjectives and the Arabic comparative share the same pattern. Therefore, both forms can be easily confused as noted by Wickens (1980 : 78)²¹. But there is no connection between the two except being homomorphs. Thus *ʔaHmar* is "red" whereas *ʔaSgar* is "smaller". Moreover, the colour and defect adjectives, as noted above inflect for gender and number, whereas the comparative form is invariant.

On the other hand, a different argument is suggested by Bravmann (1968 : 31-38) who studies the origin of the Arabic comparative form /ʔaFCaL/ and explains it from a diachronic point of view. Bravmann claims that there is a connection between the comparative form and the colour and defect adjectives in Arabic. Bravmann (1968 : 29) states that :

"The use of the adjective form ʔaFCaL as a designation of colour and conspicuous bodily or other qualities on the one hand, and as an expression for the comparative-superlative of ordinary adjectives on the other hand, has naturally some connection with the meaning of intensity in both categories."

Bravmann correctly notes that the use of the comparative form with other adjectives, e.g. *kabiir* /ʔa-kbar "big/bigger" secondarily expresses intensity, therefore, Bravmann, wrongly, generalizes that the occurrence of the comparative prefix *ʔa-* preceding colour and defect adjectives intensifies the meaning of the relevant forms. Bravmann (1968 29) explicitly states that :

"... we conclude from this fact that the use of ʔaFCaL to designate colors and conspicuous bodily characteristics originally also constitutes such a use of comparative-superlative without any real comparison."

To me this is unacceptable because the "Colour" and "Defect" pattern of /ʔaFCaL/ is not related to the comparative form /ʔaFCaL/. Similar views are expressed by Bishai (1971 :

104) who states that :

"There is no relation between the comparative form *ʔaFCaL* and the regular adjective pattern of colour and defect other than their being homonyms."

Similarly Wickens (1980 : 78) observes that the comparative is only similar in form to the "Colour" and "Defect" adjectives. Moreover, Bravmann's argument cannot be accepted for the following reasons :

i. The comparative form is morphologically different. It is invariable in form (cf. Wright Vol II 1898 : 134) as opposed to colour and defect adjectives which vary according to the modified head noun, as we discussed above.

ii. There are other patterns in Arabic which are similar but syntactically and semantically differ, e.g. the pattern */FaaCiL/* which includes both the active participle as well as the Simple adjective.

iii. There is a verb pattern of */ʔaFCaL/* namely the fourth pattern which designates no meaning of intensity at all (cf. Wright Vol I 1896 : 34). Intransitive verbal members of this pattern may have a causative meaning, as noted by Wright (1896 Vol I : 34) : *jalas* "sat" *ʔajlasahu* "to bid one to sit down". Thus the prefix *ʔa-* occurs in other patterns as correctly stated by Bateson (1967 : 19) :

"outside the system of derived verbs, the prefixed glottal stop has three principal uses : (a) in forming several different plurals, especially the 'plurals of paucity'; (b) for the comparative-superlative *ʔaFCaL*, [...] (c) for adjectives denoting colors or physical peculiarities "

Therefore, there are different functions of the pattern */ʔaFCaL/* which include verbs which do not have any sense of intensity.

iv. There are some members of the pattern */ʔaFCaL/* which simply do not accept the "meaning" of intensity, e.g. *ʔacraj* "lame" or *ʔacwar* "one-eyed", *ʔacma* "blind". Clearly such defect adjectives, which belong to the pattern of */ʔaFCaL/* cannot be modified by an intensifier adverb such as *jiddan* "very"; consequently they cannot express "intensity".

Thus "the meaning of intensity" assumed by Bravmann is not true.

v. The exclamatory *ma* "How" precedes only the comparative pattern of /ʔaFCaL/ but not the Simple pattern of /ʔaFCaL/. Therefore, the example in (6.a) is acceptable whereas that in (6.b) is not :

10.a *ma ʔakrama ʔal-carab*

how generous the-Arab

"How generous the Arab are!"

10.b **ma ʔaHmara ʔal-wardata*

how red the-flower

"How red the flower is "

10.c *ma ʔajadda Humrata ʔal-waradati*

how strong redness the-flower

"How strong the flower redness is!"

To express the same meaning in (10.b) the adjective must be preceded by terms such as *ʔajadda* "stronger" as in (10.c). Therefore the comparative form and the Simple /ʔaFCaL/ form of Colour and Defect are different from each other since the former accepts *ma* "how" whereas the latter does not. Thus, the connection assumed by Bravmann between the comparative form and the adjectives of colour and defect is not acceptable since there is no relation between them except that they are homomorphs.

To sum up, it has been discussed that adjectives differ from nouns morphologically. They occur in two genders and take some predictable formatives for the feminine. It is also discussed that even the irregular adjectives of the pattern /ʔaFCaL/ take a predictable feminine pattern, namely /FaCLaa?/. It is also shown that the /ʔaFCaL/ adjectives differ morphologically from nouns with respect to number since they take the plural pattern /FuCL/ which is restricted to such adjectives excluding nouns.

A canonical noun, on the other hand, does not show a distinction between masculine/feminine since most nouns belong to one gender with the exception of few

which are identified as animate. Although the noun gender is sometimes recognized from its morphological shape, it is not as systematic as adjectives. Therefore, we conclude that adjectives and nouns differ from each other morphologically with respect to gender. Thus, the same criteria employed by the traditional grammarians in order to include nouns and adjectives in the same lexical class, on the basis of their similarities, is found to give crucial distinction between the two, providing evidence as to their differences.

3.3 ADJECTIVE NUMBER

Is there a difference in number between adjectives and nouns? This is the question we will try to answer in this section. Most Arabic adjectives, it will be argued, pluralize according to the Sound Pl. whereas most nouns pluralize according to the Broken Pl. Thus it is important to define each kind of plural before we start the discussion. Sound Pl., according to the traditional Arab grammarians is defined formally by attaching the Sound Pl suffixes to the relevant form (cf. A. Hasan 1976 Vol I : 143). On the other hand, the Broken plural is derived by modifying the stem of the relevant singular form. Wright (1896 Vol I :19-191) distinguishes between the two types of plurals as follows :

"The one, which has only a single form, is called the sound or perfect plural (?al-jamc ?aS-SaHiiH), because all the vowels and consonants of the singular are retained in it. The other, which has various forms, is called the broken plural (jamc ?at-taksiir) because it is more or less altered from the singular by the addition or elision of consonants and the change of vowels."

The data show that Arabic adjectives, particularly Participial and Denominal, take the Sound plural. Furthermore, the Arabic participles, active and passive, may occur as a property-denoting expression or an entity-denoting expression. Thus the active participle *kaatib*, for example " is interpreted as "writer or writing", however, its corresponding Sound Pl, *kaatibuun*, must be interpreted as "writing Pl" as opposed to its corresponding Broken Pl, *kuttaab* , which is interpreted as "writer Pl". Similarly the passive participle

madfuun "buried", for example, has a corresponding Sound plural *madfuun-iin* "buried Pl", and a Broken plural *madaafin* "graves". The data also show that the denominal adjectives occur in the Sound plural. However, our data show that there are Simple adjectives that take the Sound plural and there are other Simple adjectives which take the Broken plurals. The 20 Simple adjectives occurring in the data in the Broken plural and the other adjectives occurring in the singular which can possibly have corresponding Broken plural are grouped together in order to find their Broken plural patterns and compare them to those of the nouns. This can be summarized as follows :

1. Central adjectives take Sound and Broken plurals, as well as "non-rational" plural which does not involve a stem modification.
2. Adjectives such as colour and defect pluralize according to the pattern /FuCL/, which excludes nouns, as we discussed in §3.2.1.
3. The Broken plurals occurring in the data and the Broken plurals which do not occur in our data but correspond to the singular adjectives occurring in our data are classified into different patterns. It is found that there are 10 adjective Broken plural patterns. Only two, viz. /FiCaaL/ and /FuCuuL/, are iambic as opposed to nouns which have 12 iambic Broken plural patterns. Notice that we restrict the comparison to the Iambic because it is the typical noun Broken plural which are compared to the typical adjectives, i.e. those which represent central members,
4. From a statistical point of view, Simple adjectives pluralized in the Broken plural are much less frequent than those which do not (in the data only 20 forms occur in the Broken Pl). And the Simple adjective Patterns that do pluralize according to the Sound plural are far more numerous than that which do not.
5. Investigation of nouns shows that central members take only Broken plural which constitute the norm rather than the exception, as opposed to some restricted types of untypical nouns such as proper names, names of the letters and derived nouns which can take the sound plural, and which constitute the exceptional cases rather than the norm.

Therefore, it will be concluded that although adjectives have broken plurals, they differ

as to the type of the Broken plural patterns they take. Moreover, they have a Broken plural pattern, namely /FuCL/ which is restricted to adjectives. It is also important to note that many adjectives including those which take a Broken plural occur in the data in the "non-rational" plural when modifying a non-rational head noun. This type of plural is not a Broken plural since it does not involve modification of the relevant stem, but rather derived by the suffix *-at*. This, if true, suggests that the Broken plural of central adjectives correlates with "rational" and the *-at* plural correlates with "non-rational", e.g. *rijaalun cuZamaa?* "great men" vs *kutubun caZiim-at-un* "great books", but not **rijaalun caZiim-at-un* or **kutubun cuZamaa?*. Therefore, these central adjectives take Broken plurals which have corresponding *-at* plurals, i.e. "non-rational", from which nouns are excluded, i.e. a Broken Pl. noun would not have a corresponding non-rational Pl. This is another important morphological characteristic which is restricted to Arabic adjectives excluding nouns.

It will be argued that while central members in the adjective class take the M. Sound plural and the Broken plural, central members in the noun class take only Broken plural. This is not to deny that there are some nouns that take the M. Sound plural, but such nouns are not the norm, i.e. they are not central members in the class of nouns nor do they constitute the majority of nouns.

3.3.1 The Sound Plural of Arabic Adjectives :

Derived adjectives are divided into three different types participial, comparative and denominal. The comparative adjectives are invariant for gender and number, therefore, they will not be discussed here. On the other hand the participial and denominal adjectives pluralize regularly according to the Sound Pl. In this connection the following examples are illustrative :

11.a wa ?acdaa?-uhu ?al-kaθiir-uun fi ?al?iskandariyat-i

and enemies-his the-numerous-Pl.NOM in Alexandria-GEN

"and his numerous enemies in Alexandria."

(G20)

- 11.b hum haadi?-uun
 they M. quiet-Pl.NOM
 "they are quiet." (I480)
- 11.c ?al-?aTfaal-u ?al-qaḍir-uun
 the-children-NOM the-dirty-Pl.NOM
 "the dirty children." (G10)
- 11.d min ?abnaa?-i Haarat-ina ?aT-Tayyib-iin
 from boys-GEN quarter-our the-nice-Pl.M.NOM
 "from the nice boys of our quarter (of the city)." (I319)
- 11.e wa ?axtalaTat ?al-kalimaat-u ?aT-Tayyib-aat-u
 and mixed the-words-NOM the-nice-Pl.F.-NOM
 "And the nice words mixed." (I150)
- 11.f ?al-banaat-u jaa?ic-aat-un
 the-girls-NOM hungry-Pl.F.-NOM
 "The girls are hungry." (B11)
- 12.a wa hum junuud-uhaa ?as-sirr-iyy-uun
 and they M. soldiers-her the-secretive-Pl.NOM
 "And they are her secretive soldiers." (K7)
- 12.b bacD-u jiiraan-ii kaanuu qaadim-iin min ?al-cuTuuf-i
 some-NOM neighbors-my were coming-Pl.ACC from the-alleys-GEN
 "Some of our neighbors were coming from the alleys." (I349)
- 12.c naHnu qaadim-uun ya Sadiiq-ii
 we coming-Pl.NOM O friend-my
 "O my friend, we are coming." (I322)
- 12.d rijaal-i ?al-wiHdaat-i ?al-xaaS-at-i ?al-muHaaSar-iin
 men-GEN the-units-GEN the-special-F-GEN the-surrounded-Pl.GEN
 "The surrounded men of the special units." (H116)
- 12.f bacda daqaa?iq-i macduud-aat-in
 after minutes-GEN counted-F.Pl.-GEN
 "After a few minutes" (J126)

In the above examples all the underlined adjectives occur in the Sound plural. The adjectives in (11) are Simple, and those in (12.a) are denominal, in (12.b-12.f) are active and passive participles respectively. They occur in the M. Sound plural, as in the (11.a-11.d) and (12.a-12.d), or in the F. Sound plural, as in (11.e-11.f) and (12.f). For instance the Simple adjective *haadi?* "quiet", in (11.b), takes the M. Sound plural suffix *-uun* and modifies a M. plural head. The Simple adjective *Tayyib* "nice", in (11.d) takes the F. Sound plural suffix *-aat* and modifies a F. Pl. Similarly the Denominal and participial adjectives in (12) take the M. and F. Sound Pl. This clearly shows that Simple, denominal and participial adjectives occur in the Sound plurals and take the corresponding suffixes.

It is also interesting to note that the active and passive participles have corresponding Broken plurals which are interpreted as entity-denoting expressions, rather than as property-denoting ones. In this connection the following examples are illustrative.

- 13.a *yuHawwil-uun-ahu ?ila cunSir-in caaqil-in kaatib-in*
 change-Pl.M.-him to element-GEN wise-GEN writing-GEN
 "They change him to a wise writing element." (F32)
- 13.b *?aT-Tullaab-u [?al-kaatib-uun ?al-qiSSat-a]*
 the-students-Nom the-writing-Pl.M.NOM the-story-ACC
 "The students writing the story ... "
- 13.c *[kuttaab-u ?al-qiSSat-i]*
 writers-NOM the-story-GEN
 "the story writers "
- 13.d ** [kuttaab-u ?al-qiSSat-a]*
 writers-NOM the-story-ACC
- 13.e ** [?al-kuttaab-u ?al-qiSSat-i]*
 the-writers-NOM the-story-GEN

In the (13.a) above the underlined active participial adjective has a corresponding Sound plural adjective in (13.b) and Broken plurals in (13.c-13.e). The formal distinction

between the (13.b) and the (13.c) is correlated with semantic and syntactic differences. Semantically the underlined item in (13.b) must be interpreted as a participle : *?al-kaatib-uun* "the writing Pl.". On the other hand, the Broken plural must be interpreted differently. In (13.c), for instance, *kuttaab-u* is interpreted as "the writers". This semantic relation is correlated with parallel syntactic features. The Sound plural of the participial adjective in the bracketed phrase in (13.b) governs the following noun, *?al-qiSSat-a* "the story", and assigns it the accusative case. Its corresponding Broken plural occurs in the same bracketed phrase in (13.c) with the following noun, *?al-qiSSat-i* "the story", in the genitive rather than the accusative case²². The occurrence of a following accusative noun after such Broken plurals is ruled out, therefore example (13.d) is unacceptable. Moreover, in the bracketed phrase in (13.e) the Broken plural *?al-kuttaab-u* "the writers", like the participle in (13.b), contains the definite article but the example is ruled out for that reason, i.e. whereas the underlined Sound plural in (13.b) takes the definite article the corresponding Broken plural in (13.e) cannot. Thus the semantic difference between the interpretation of the Sound plural as opposed to that of the Broken plural correlates with the case marking of the following noun and with the feature of definiteness. These examples clearly show that with regard to case and definiteness (the two formal criteria found in both nouns and adjectives, and according to which the traditional Arab grammarians include adjectives with nouns) the participial adjectives are different from their corresponding nouns.

Moreover, McCarthy (1985 : 409-416), who studies the phonology and morphology of the Semitic system in a very formalized system which does not concern us here, observes in the very last pages of his work that :

"there is a correlation between the distribution of broken plurals and semantic noncompositionality in derived nouns. It is supported by the facts immediately above as well as by the obvious point that nonderived nouns have inherently idiosyncratic meanings and correspondingly almost invariably take broken plurals."

Thus derived nouns with Broken plurals are characterized by having "noncompositional" meaning as opposed to derived nouns, with Sound plural, which also

can take the Broken plural which has "inherently idiosyncratic meanings". He provides the following examples :

Verb Form II :

<i>Sannafa</i>	"to compose, to write"	
<i>taSniif</i> ,	<i>taSniifaat</i>	"composing, writing" (Sound Pl.)
	<i>taSaaniif</i>	"literary works" (Broken Pl.)

Verb Form IV :

<i>?asnad</i>	"to support, to base"	
<i>?isnaad</i> ,	<i>?asaaniid</i>	"the chains of authority for a tradition" (Broken Pl.)

The above examples clearly show that the interpretation in the Sound plural correlates with the interpretation of the corresponding (masdar) as opposed to the interpretation of the Broken plural which differs. Thus *?asaaniid* "the chain of authority" and *taSaaniif* "literary works" has an extra sense by virtue of taking the Broken plural as noticed by McCarthy (1985 : 415) :

"It is only when the masdar has the extra, concrete sense that it takes a broken rather than a suffixing plural."

Thus, we can assert that the Broken plural is associated with the noncompositionality in meaning, and we can assert that if the singular form takes a Sound plural, it should be interpreted as participial and if it takes a Broken one it should be interpreted as nominal. Similar observations apply to the passive participle, which is, like the active participle, can occur as an entity-denoting expression. Thus the singular form *maktuub*, for example, can be interpreted as "letter" or "written", while the Sound plural *maktuub-uun* is interpreted as "written" and its corresponding Broken plural, *makaatiib*, is interpreted as "letters". The restriction noted above about the active participle occurrence in the "construct phrase" having the definite article applies to the passive participles : **?al-makaatiibu ?al-qiSSati* "the letters-Broken Pl. of the stories", as opposed to *?al-mafduud-ii ?al-?acSaabi* "the tensed-Sound Pl in nerves". Thus the semantic difference between the interpretation of the passive participle Sound plural and the interpretation of the Broken plural correlates with the definite article, i.e. in the construct phrase the Broken plural cannot take the definite article as opposed to the Sound plural which occurs in the same structure and takes the

definite article. This also shows that the passive participle provides a clear evidence as to whether a form can or cannot take the definite article in the construct phrase²³. For more similar passive participial adjectives which occur in the data and which provide further evidence as to the differences established here see Appendices II and IV.

3.3.2 Broken Plural of Simple Adjectives :

From a statistical point of view, the Simple adjectives pluralized in the Broken plural are much less frequent than those which do not. The data show that there are only 20 (4 %) forms occurring in the Broken plural as opposed to 501 (96 %) which do not occur in the data with Broken plural. Moreover, while there are 20 examples occurring in the Broken plural there are 109 examples (including Simple, denominal and Participial adjectives) occurring in the Sound plural (see §3.2.3). But because there are Simple adjectives which can take the Broken plural other than the 20 adjectives actually occurring in the Broken plural in our data, we surveyed whether the Simple adjectives in our data can possibly take the Broken plural. The Hans Wehr dictionary (A Dictionary of Modern Written Arabic) has been consulted in order to find whether an adjective take a Broken plural or not²⁴. The result of the survey shows that out of the 521 Simple adjectives only 116 -including the 20 adjectives actually occurring in our data- can take the Broken plural, which constitute 6.5 % of the total number of all adjectives, i.e. Simple, denominal and Participial =1799 adjectives. This is clearly a significant indication that Broken plural of Simple adjectives is not the norm since the number of adjectives that take the Sound plural outnumbers those that take the Broken plural. Notice that this statement does not take into consideration actual occurrence in the data but rather possible occurrence in general.

We arranged the result of our survey in the Hans Wehr dictionary into various patterns. That is, the 116 Broken plurals are classified into various plural patterns in order to compare them with the corresponding nouns plural patterns. The most canonical noun plural are found to be the iambic plural pattern to which we will compare the Simple adjective Broken plural patterns which are summarized in Table (7) below.

Broken Plural Patterns For Simple Adjectives

Patterns	FaCiiL 160/2634	?aFCL 15/300	FaCiL 44/263	FaCL 22/83	FaCuul 16/72	FuL 3/15	FaCL 22/5	FaCCaaL 31/81	FaCLan 6/10	FiCCiiL 2/4	Total
1. FuCaLaa?	45		1						1		47
2. FiCaaL	17		1	2			1	1			22
3. ?aFCiLaa?	9		8		1	1					19
4. FuCL		15									15
5. ?aFCaaL						1	2			1	4
6. FaCLaa	1		1						2		4
7. FuCuL	2										2
8. FuClaa	2										2
9. FuCuul				1							1
TOTAL	76	15	11	3	1	2	3	1	3	1	116

Table (7)

The above Table clearly shows that the Simple adjectives which do not occur in the Sound plural are much less numerous than those which do. The 116 Simple adjectives which have corresponding Broken Pl. belong to different singular patterns. The top row shows the total number of the adjectives in each pattern (to the left of the slash) and the total number of their corresponding occurrences (to the right of the slash).

The first column shows the different Broken plural patterns of these Simple adjectives. There are 9 different Broken Pl. which are ordered vertically according to their total number. The most frequent one is pattern /?aFCaL/ since all the members in that pattern can occur in the Broken plural, then comes, the pattern /FuCaLaa?/ (47 adjectives), then comes /FiCaaL/ (22 adjectives) and /?aFCiLaa?/ (19 adjectives). The other Broken plural patterns total is 12. The importance of the facts presented in Table (7) above will become clearer when we discuss the noun Broken Pl. since it will be shown that only patterns (2) and (9), in Table (7) above, have corresponding noun Broken plural. However, these two patterns are less frequent. The other adjective Broken Pl. patterns, which are more frequent, namely those in (1), and (3-8), in which 93 different adjectives occur, are restricted to adjectives since the iambic noun plural patterns are different.

Thus the simple conclusion we can draw from this is that although there are Broken adjective Patterns, they seem to be different from the Broken noun Patterns. Moreover, those adjectives which have Broken Pl. patterns similar to nouns are only 23 which constitute 20 percent. Furthermore, there are 7 adjective Broken Pl. patterns which are restricted to adjectives which constitute 80 percent. Examples of these Broken plural

patterns are as follows :

- | | | | | | |
|----------------|------------------|---------------|-------------|---------------|-------------|
| 1. /FuCaLaa?/ | <i>jubanaa?</i> | "coward Pl." | 2. /FiCaaL/ | <i>Tiwaal</i> | "tall Pl." |
| 3. /?aFCiLaa?/ | <i>?agbiyaa?</i> | "stupid Pl." | 4. /FuCl/ | <i>suwd</i> | "black Pl." |
| 5. /?aFCaaL/ | <i>?agraab</i> | "strange Pl." | 6. /FaCLaa | <i>sakraa</i> | "drunk" |
| 7. /FuCuL/ | <i>judud</i> | "new Pl." | 8. /FuClaa/ | <i>kubraa</i> | "big" |
| 9. /FuCuuL/ | <i>kuhuul</i> | "old" | | | |

I will not discuss these adjectives. But it is important to note that since these plurals belong to the central type of adjectives, i.e. Simple adjectives, we compare them to the central or more typical type of noun plurals, namely the iambic noun plural. The result will show that out of the 9 adjective Broken plurals only two are found in the noun iambic plurals viz, /FiCaaL/ and /FuCuuL/, i.e. patterns (2) and (9) in Table (7) above.

3.3.3 The Iambic Patterns :

The traditional Arab grammarians distinguished between two kinds of plural formation : The Broken plural and the Sound plural. The Broken plural involves internal modification of the singular stem. The Sound plural, on the other hand, is formed by suffixation of masculine *-uun /iin* or feminine *-aat* (cf. Hasan 1976 Vol IV : 626). Earlier we discussed the Sound plural and illustrated that it is related to adjectives since they are primarily pluralized according to the Sound plural. In this section we will demonstrate that nouns are pluralized primarily according to the iambic Broken plural. For instance, the singular noun *kitaab* "book" has a corresponding plural *kutub* "books". The noun stem *kitaab* has been changed in order to derive the relevant Broken plural. The change here involves only the vowel system of the stem. In some other cases it may also include the addition of a glide as in *Haarat / Hawaariy* "quarter/Pl." .

Wright (1896 Vol I: 190-225) counts 31 different Broken plural patterns for nouns which are divided into 4 shape-defined categories by McCarthy and Prince (1990)²⁵. The most productive and the most representative of the noun Broken plurals is the iambic. McCarthy and Prince (1990 : 221) present several arguments which are central to the account that the iambic plural is the only productive mode of plural formation in the

language.

They illustrated that the iambic sequence CVCVV+ is a key invariant uniting several different Broken plurals such as FaCL/FuCuuL (*nafs /nufuus* "soul/Pl"), FaCaL/FuCuuL (?*asad /?usuud* "lion/Pl"), FaCiiL+at/FaCaa?iL (*jaziirat /jazaa?ir* "island/Pl."), FaaCiL+at/FawaaCiL (*faakihat /fawaakih* "fruit/Pl."), FaaCaL/FaWaaCiL (*xaatam /xawaatim* "ring/Pl."), and FuCLuL/FaCaaLiL (*jundub /janaadib* "locust/Pl."). They also argue that the formation of diminutives in Arabic is "canonically nearly identical to the iambic plural". They also noted that loanwords always form iambic plurals even when the singulars are canonically consistent with other modes of pluralization. Thus the loan nouns *baSS / buSuuS* "bus/Pl", *bansil / banaasil* "pencil/Pl.", *huub / ?ahwaab* "hub/Pl.", for example, are pluralized according to the iambic plural. Thus the iambic plural is the most productive since identical morphological resources are exercised in the disputably productive (the relation with other Broken plural), in the diminutive and in the loanwords where the iambic plural is the only form. Therefore, McCarthy and Prince concluded that "the iambic plural is the only broadly-based, productive mode of pluralization in the language".

While the iambic Pl. is the most productive and frequent for nouns it is not for adjectives. In the previous section it is discussed that the pluralization of the 116 Arabic adjectives is according to 9 patterns which are arranged in Table (8) from the most frequent to the least.

Adjective and Noun Broken Plurals

Adj. Patterns	Total	N. Iambic
1. FuCaLaa?	47	FiCaaL
2. FiCaaL	22	FuCuuL
3. ?aFCiLaa?	19	FaCaaC
4. FuCuL	15	FaCaaL
5. ?aFCaaL	4	FaCaaL+ay
6. FaCLaa	4	FaCiiL
7. FuCuL	2	FuCuuL+at
8. FuClaa	2	FiCaaL+at
9. FuCuuL	1	FawaaCiL
Total	116	FaCaa?iL
		FaCaaCiL
		FaCaaCiiL

Table (8)

In the above Table there are 9 different patterns of the Broken plural adjective corresponding to the singular adjectives that occur in the data. The patterns (1, and 3-8) do not belong to the iambic plural group. The most frequent patterns, such as /FuCL/ and /FuCaLaa?/ since all the members in the former pluralize regularly according to this pattern, and the latter includes 47 of the adjectives, are not iambic Broken plural. The other five patterns, (3) and (5-8), though less frequent, are not iambic. Thus, there are 93 adjectives that cannot occur in any of the noun Broken plurals represented above which constitute 80 percent. Only the adjective plural patterns in (2) and (9) are iambic, which include 23 adjectives. This clearly shows that the iambic plural of adjectives is not as frequent as the other non-iambic patterns since it applies to less adjectives.

Thus, although some adjectives are pluralized according to the Broken plural, their Broken plural patterns are either restricted to adjectives excluding nouns such as the Broken Pl /FuCL/ corresponding to the singular colour and defect adjectives, or differ from those of the nouns, as in the adjectives Pl. in (1, 3-8), or share the same Broken plural with less frequency, as in (2) and (9).

On the other hand, the Sound plural of nouns seems to be restricted to some untypical nouns such as proper names, names of the letters, derived nouns, and deverbals. However, these nouns are not typical. Moreover, for nouns Broken plural is the norm as noticed by McCarthy and Prince (1990 : 212) :

"Although the term "sound plural" suggests normality- and indeed its form is entirely predictable from gender and other grammatical information - the sound plural is in no way the regular or the usual mode of pluralization. Essentially all canonically-shaped lexical **nouns of Arabic take broken plurals, including many loans**, even recent ones (emphasis is mine) :

Thus, the Broken plural is the norm rather than the exception for nouns²⁶. Moreover it is clear that the above types are untypical nouns. Proper names, derived nouns, deverbals, non-canonical loanwords, and the names of the alphabet have different characteristics which make them different from typical nouns. Not all derived nouns take the Sound plural suffix *-aat* and even the suffixation of such a formative to such nouns is not without a stem

modification of the relevant singular form of the noun which indicates that the relevant form is not Sound plural, according to our definition of Sound plurals. For example, the derived noun *maxbaz* "bakery" takes the Broken plural *maxaabiz* "bakeries", and the derived noun *na fjaafat* "dryer" takes the Sound plural *-aat* but with a modification of the corresponding singular form : *na fjaaf-aat* "dryers" but not **na fjaafat-aat*. Thus, even the so called Sound plural for derived nouns is not formed by adding the relevant suffix without a modification of the relevant stem. Therefore, it is not a Sound plural according to the definition given by the traditional grammarians as quoted above.

Proper nouns, names of the alphabets, and deverbals are not typical nouns since they indicate entities without any further specification. They are not located in a "psychologically three-dimension space" nor are they publicly observable (cf. Lyons 1977 : 443)²⁷. Thus nouns like *bayt* "house", *kitaab* "book" have concrete qualities associated with physical objects. Proper names are different from concrete nouns. A "tree" is always a "tree", however, a person called "Abdulaziiz" can be called "Abdul" at work, "Aziiz" at home, "Ubad" among his friends. Proper names are different from human nouns such as "teacher", "king", "man", "woman" etc. The individual that has the proper name "John", for instance, can have another proper name : John Smith. Thus one and the same individual can have two or more proper names (cf. Hurford & Brendan 1983 :145). Furthermore, in Arabic, as well as in English, proper names have some characteristics in common as follows:

- A. They cannot be preceded by the definite article.
- B. They cannot be pluralized.
- C. They cannot be quantified

In this connection the following examples are illustrative :

- 15.a *jaa?a Zaydun*
"Zayd came."
- 15.b **jaa?a ?az-zaydu*
"the Zayd came."
- 15.c **jaa?a zayd-uun*
"Zayds came."

15.d *jaa?a jamiicu zayd-uun

"All Zayds came."

In (15.a) above the proper name *Zayd* is the subject of the sentence and occurs in the singular without the definite article *?al-* "the". The examples in (15.b-15.d) are unacceptable. In (15.b) the proper name *Zayd* is prefixed by the definite article; in (15.c) it occurs in the Sound plural form and in (15.d) it is preceded by the quantifier *jamiic* "all". Thus morphologically as well as syntactically proper names are different from typical common nouns which can have all the features in (A-C) above. The point I wish to make here is that all these proper names which can possibly have Sound plural are not typical nouns. This is because the Sound plural for nouns is regarded exceptional. McCarthy and Prince (1990) express similar views and consider the Sound plural in nouns as exceptional, rather than typical. To quote,

"In Arabic the "special case" system is fully articulated and relatively few items escape it to end up with the default "sound" suffix. For the lexicon as a whole, then **broken plural formation is by far the norm rather than the exception** (emphasis mine)."

Similar observations are made by Justice (1987 : 19); and Wickens (1980 : 42) notes that :

"Broken Plurals, applying to the vast majority of Arabic nouns, need to be learned automatically as one learns the noun itself. They vary from noun to noun."

The Broken plural of nouns exists not only in Modern Standard Arabic but also in Arabic dialects such as Syrian Arabic. Cowell (1964 :371) studies Syrian Arabic and notices that its broken plural is a lexical idiosyncrasy. Thus we may safely state that Arabic nouns have many different patterns of Broken plurals which are highly unpredictable and which constitute the norm rather than the exceptions. Regarding the so called noun Sound plural it seems that it is formed by modifying the stem of the relevant singular form or it is manifested in a small number of noncanonical nouns. In other words, the central members in the noun class do not take the M. Sound plural, but rather the Broken plural.

3.4 Concluding Remarks :

(i)

Arabic adjectives inflect for both gender and number. While the adjective gender is highly predictable and can be assigned by a rule the noun gender is unpredictable. Therefore, adjective gender is associated with the inflectional paradigm since it constitutes highly structured sets of words with regular patterns as opposed to the noun gender which is associated with the derivational paradigm. On the other hand, the treatment of the adjective number shows the following :

a. Participial adjectives (both active and passive) pluralize regularly according to the Sound plural by taking the suffixes *-uun /-iin* , in the masculine, and *-aat* in the feminine.

b. Denominal adjectives pluralize regularly according to the Sound plural by taking the suffixes *-uun /-iin* , in the masculine, and *-aat* in the feminine.

c. Most of the Simple (central) adjectives pluralize according to the Sound plural suffixes *-uun /-iin* , in the masculine, and *-aat* in the feminine. However, it is noted that there is a number of Simple (central) adjective (116) that are pluralized according to the Broken plural. These adjectives seem to share with nouns two iambic Broken plurals. However, other adjectives take different Broken plurals, and in some cases, such as the pattern /FuCL/, they take a Broken plural pattern from which nouns are excluded. Thus, the central members of the class of adjectives take Sound and Broken plurals, while the noun central members take mainly Broken plural which constitute the norm, rather than the exceptions.

Therefore, with respect to the feature of number Arabic adjectives can be divided into two main groups :

- a. Those which are pluralized regularly according to the Sound plural : participial and denominal and
- b. Those which are pluralized according to the Sound and the Broken plurals : Simple adjectives.

It is discussed earlier that Simple adjectives correspond to central adjectives since they

can be characterized by the prototypical features of the class of adjectives, i.e. attributive occurrence, predicative occurrence, modification by intensifiers such as *jiddan* "very" and occurrence in the comparative and superlative, etc.. Thus, considering the grammatical feature of number and the criterial features of central adjectives, we can have the following two groups of adjectives.

Adjective Types	Number Feature	Criterial Features	No. of Occurrences
Simple (Central)	Broken & Sound Pl.	all	4920
Participial	Sound Pl.	some	2878
Denominal	Sound Pl.	some	1238

Table (9)

The above Table shows that Central adjectives (Simple) are characterized by all the criterial features of adjectives and have both Broken and Sound plural. Participial and Denominal adjectives, on the other hand, are characterized by some of the criterial features (they generally cannot be modified by intensifiers nor can they occur in the comparative and superlative) and occur in the Sound plural. Table (9) above, shows that Simple adjectives are more frequent since they occur in 4920 different examples as opposed to the Participial and denominal adjectives which occur in 2878 and 1238 respectively. Moreover, with respect to the Simple adjective patterns they seem to have many different unrelated patterns whereas the participial and the denominal adjectives have very systematic and predictable patterns. Thus central adjectives are the unmarked members of the adjective class since they have a wider range of occurrences. That is why Greenberg (1966 : 4) asserts that "in general the unmarked category has higher frequency than the marked". Quirk et al (1985 : 68) and Greenberg (1966 : 29) notice that there is a lesser degree of irregularity on the marked forms. Similarly Huddleston (1984 : 11) observes that "the unmarked term is the one that is syntactically more basic, while the marked terms can be most conveniently described by reference to the way they differ from the unmarked term". Thus the morphological variation with respect to the pluralization of central adjectives (Simple adjectives) is natural since it occurs in the unmarked type of adjectives. Therefore, the problem of Broken plural in Arabic adjectives, i.e. the fact that Simple adjectives have both

Broken and Sound Broken, is explained by the markedness notion which predicts that the unmarked member is more "neutral or general".

This is manifested in other languages such as English. In English one sequence of grammatical functions can be unmarked as opposed to another. The subject-verb-object sequence (SVO) is unmarked as against OSV, though both occur :

16.a I bought the house.

16.b The house I bought.

Here the unmarked order may have neutral intonation, may be unmarked by a special morpheme (cf. Steele 1978 : 591), and may be statistically more frequent (Greenberg 1966 : 58, 67). Quirk et al (1985 : 69) also notice that the English present tense is unmarked since it refers to "time in a general sense, including past, present, and future time". Thus "the unmarked class is characterized by the very lack of homogeneity" (cf. Hopper and Thompson 1985 :165).

Thus the Broken pluralization of Arabic adjectives, which seems to be a morphological problem unaccounted for, correlates with the other syntactic features of central adjectives in providing another evidence, from a morphological point of view, towards the classification of Arabic adjectives into central as opposed to non-central.

(ii)

With respect to gender Arabic adjectives it is predictable, and therefore, it can be correlated with inflectional processes rather than derivational ones. Similar observation is made by Bybee (1985 : 99) who defines the inflectional morpheme as "a bound nonroot morpheme whose appearance in a particular position is compulsory" (cf. Babee 1985 : 81). This applies to adjective gender, rather than noun gender which seems to be unpredictable, and does not follow a rule. Such rigidity in the adjectives gender correlates with inflectional processes, as noticed by Bloomfield (1933 : 223) "rigid parallelism of underlying and resultant forms".

Thus, the inflectional paradigms are highly structured sets of words with regular patterns. In Arabic, adjectives must be either feminine or masculine depending on the

modified head noun. Thus the same adjective stem can take different feminine suffixes. This obligatory requirement is not applicable to Arabic nouns since each belongs to only one gender. If this is correct, then, gender in Arabic adjectives is inflectional as opposed to noun gender which is not²⁸.

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- 1 Lyons (1968 : 318) notes that :

"the circularity lies in the fact that the only reason we have for saying that truth, beauty, and electricity are 'things' is that the words which refer to them in English are nouns".

- 2 Lyons (1977 : 440) observes that :

"The semantic part of the traditional definition of the parts of speech presupposes the possibility of identifying entities, properties actions, relations, etc. independently of the way in which these are referred to or denoted in particular languages"

- 3 We will see how semantics is important in distinguishing between adjectives and nouns (see §4.3).
- 4 See also cumar, Ahmed M. (1988 : 85) *al-naHw Al-lugawi cind Al-carab* "The Arabic Linguistic Science".
- 5 The rise of the tripartite system in the traditional Arabic grammar theory came possibly as an influence of the Greek grammarians. Fischer (1962-63) asserts that such a division was adopted by Hebrew grammarians from Arabic and that the Arabs have followed in this formulation the Greek Pattern.
- 6 We will see in Chapter IV that the occurrence of adjective in subject position is not typical both from a quantitative and a linguistic point of view (see §4.2).
- 7 We will see in due course that this claim is not accurate since adjectives are morphologically different from nouns with respect to gender, number and definiteness.
- 8 Bateson (1967 : 42) states that " there is some morphological justification for setting up a class of adjectives on the basis of the partial specialization of derivational forms, [...] participles and relative adjectives generally take sound plural, and even where they have broken plurals, these are more predictable than broken plurals of nouns. When the use of first form participles as substantives crystallizes, they acquire specialized broken plurals *r-rijaalu l-kaatibuun* " the writing men" vs *l-kuttaab* "the scribes".
- 9 Similar views are put forward by Owens (1988 : 130) who observes that "under the careful examination of the Arabic grammarians the three individual word classes became perhaps more notable for their internal differences than for their coherency as classes".
- 10 We will discuss this point when we treat the adjective distribution in Chapter IV (see §4.1).
- 11 We will discuss how adjectives differ from nouns with respect to these categories particularly gender (§3.2), number (§3.3) and definiteness (§3.4.3).
- 12 We will see that the difference between concrete vs abstract nouns is important when we discuss the semantic characteristic of Arabic adjectives in Chapter IV (see §4.3).
- 13 There are several Simple adjectives which do not have corresponding verb Form I such

as *baahiz* "expensive, *saaḍij* "naive", *faaqic* "bright".

- 14 The distinguishing features of verbs are the person markers such as *-ta* , *-tu* , and *nuun* *?altawkid* "the energetic suffix" i.e. the suffix *-nna* which is attached to the imperfect e.g. *la ?aktuba-nna ?ad-dars-a* 'I will write the lesson'.
- 15 Unlike Arabic, in some other languages, such as Russian, the noun gender is highly predictable from its declensional type, i.e. type I is masculine, type II and III are feminine and other types are neutral (cf. Corbett 1991 : 34-43).
- 16 Exceptions to this rule are the following :
 1. Colour and defect adjectives which take the feminine /FaCLaa?/, e.g. *?aHmar / Hamraa?* "red M. Sg./red F. Sg.".
 2. The comparative adjectives which are invariant as to the gender category.
 3. Some inherently feminine adjectives such as *Haamil* "pregnant", *murDic* "nursing mother", or some inherently masculine adjectives such as *xaSy* "castrated".
- 17 There are few nouns which show a distinction between masculine/feminine such as :

<i>?amiir</i>	<i>?amiir-at</i>	"prince/F."
<i>waziir</i>	<i>waziir-at</i>	"minister/F."
<i>Himaar</i>	<i>Himaar-at</i>	"donkey/F."

But notice that such a distinction seems to be restricted to some animate nouns. There are many other animate and inanimate nouns which do not show the same distinction. This again shows that gender is not predictable in nouns

- 18 Two items are homomorphs when they have the same morphological form but different syntactic functions (cf. Quirk 1985 : 70-71).
- 19 We follow the same definitions for inchoative and causative provided by Cowell (1964 : 250) :

"If an adjective means "X" then its inchoative means "to become X"

For the causative forms Cowell (1964 : 240) notices that :

"Most causatives are derived from simple verbs. If the simple verb means "X happens", then its causative means "(Y) makes X happens" (or "... lets X happens" or "... has X happens"

- 20 Notice that not all the English basic colour terms have a causative form. For example, *brown* does not have the *-en* correspondence. On the other hand all the Arabic basic colour terms have the same correspondences.
- 21 Wickens (1980 : 78) writes that :

"We have met the Elative on a number of occasions. It too has special patterns, liable in the masculine to confusion with the adjectives of Colour and Defect."
- 22 Wright (1898 Vol II : 198) calls such a phrase the "status constructus". It corresponds to the Arabic term *IDaafah* "Annexation". Wickens (1980 : 48) observes that there are various names for such structures and that :

"the Western Arabists have traditionally spoken of the Construct, the Construct Case, or the Genitival Relationship. All are really little more than labels, and we shall use which ever seems convenient in a given situation."

For more see Chapter II.

- 23 It must be noted that in the construct phrases nouns and adjectives are distinct from each other with respect to many other features (see Chapter II).
- 24 It is a general practice in the the Hans Wehr Dictionary to indicate only the Broken plural because the Sound plural does not involve modification of the relevant stem. Therefore, when a corresponding Sound plural is not found in the dictionary it is an indication that the relevant adjective may take Sound plural. On the other hand, when the Broken plural is shown it is an indication that the adjective must take the broken plural. Notice that this specific dictionary is used because it matches the same variety of Arabic we are treating, viz. Modern Written Arabic.
- 25 McCarthy and Prince collected 3500 different nouns forming Broken plurals. The source of their data is the Hans Wehr (1971) A DICTIONARY OF MODERN WRITTEN ARABIC. McCarthy and Prince state that the patterns presented above correspond to the Broken plural of the collected nouns. They also note that the difference between the Arabic used in Wright (1896) and the Arabic used in Hans Wehr is negligible and according to their experience "the correspondence is nearly exact except for very rare plural patterns that have fallen into disuse". Furthermore, their investigation, as they note, has been much aided by the exhaustive treatment of noun Broken plural in Arabic by Levy (1971).
- 26 See also Hammond (1988).
- 27 It is publically observable for every individual whether "X" is a man or not, however, the situation is different for a person named *Zayd*, for example, since it is not true that every individual knows the person identified as *Zayd*.
- 28 The difference between the inflectional vs derivational processes is not always clear which implies that probably it is more reasonable to describe it in terms of a relative rather than an absolute criterion. Such morphological relativity is noted by Szymaneck (1989 : 24) who suggests that the productivity in morphology is a "gradable concept". To quote,

"It is unclear how one should go about assessing or measuring the relative productivity of various derivational processes [...] It has often also been stressed that productivity in morphology is a gradable concept".

But notice that even if we do not admit that there is a difference between inflectional vs derivational processes, we have to admit that the category of gender in Arabic adjectives is highly predictable as opposed to that in nouns which is not. Such predictability is observed by Bauer (1983 : 27) who states that "in derivation there are likely to be large numbers of unpredictable gaps in the system, whereas inflection is much less likely to have such unpredictable gaps". The distinction between these two morphological processes is not without problems (cf. Greenberg 1954 and Scalise 1988). Scalise (1988), for example, distinguishes between inflection and derivation noticing that :

"There is no agreement as to whether inflection and derivation should

be considered similar or different".

However, there are in fact a number of different positions which can be summarized as follows :

- a. Inflection and derivation are not different. They can be handled by the same set of rules.
- b. Inflection and derivation are different but in the sense that they are opposite poles of a "continuum" : there are phenomena for which it is difficult to decide whether they belong to the domain of derivation or to the domain of inflection (as in Bybee 1985 and Szymanek 1989).
- c. Inflection and derivation are different and the difference resides in the kind of relationship they have with syntax. Therefore, inflection and derivation are located in different subcomponents of the grammar. Inflection and derivation are different and the difference is to be seen in the formal properties of the rules that handles derivational and inflectional processes. Therefore, inflection and derivation are located in the same subcomponent of the grammar, namely the lexicon (this is Scalise position).

Whatever approach we follow there seems to be a difference between nouns and adjectives with respect to their gender and number. This difference seems to be very clear in gender in all types of adjectives, i.e. Simple, denominal, and Participial. However, with respect to number the last two types show clear difference. Any theory applied to Arabic must consider these facts.

CHAPTER IV
ARABIC ADJECTIVES AS A SEPARATE WORD CLASS :
SYNTACTIC AND SEMANTIC EVIDENCE

4.1 Introduction :

In this Chapter we will investigate the syntactic and semantic criteria for establishing the category of Arabic adjectives, and more specifically we will distinguish between adjectives and nouns. In Chapter III we showed that the claim made by the TAG that Arabic adjectives and nouns inflect similarly for the same categories of Gender and Number is not adequate. It is noted that adjectives take gender suffixes which are predictable whereas gender for nouns is inherent. It is also noted that while canonical nouns take broken Pl., adjectives, particularly participial and denominal, take Sound plural. On the other hand, although Simple adjectives take both Broken and Sound plurals, the patterns of Broken plural they take differ from that of nouns. It is also noted earlier that the TAG include the class of adjectives with nouns, therefore, the class of adjectives is not always recognized. This discrepancy is noted by linguists such as Ezzat (1975 : 45-46)¹.

In this Chapter we will provide further syntactic and semantic evidence supporting our claim that Arabic adjectives constitute a class separate from nouns. Further evidence will be provided as to the status of Arabic adjectives as a separate word class different from nouns. Many of the tests found in this section are due to this author who developed them in relation to Arabic adjectives in order to show the distributional difference between adjectives and nouns. It will be argued that from a morphological point of view Arabic adjectives inflect for the Comparative and Superlative, do not take the possessive clitic *-i* "my", nor do they obey the "complementary definiteness" system. Syntactically Arabic adjectives, unlike nouns, occur after the exclamatory *ma*, the negative *gayr* and some maximum-generality terms such as *?amr* "matter" or *ʔay?* "thing". Moreover, adjectives, unlike nouns, do not occur in the *badal ʔashumuul* structure "comprehensive permutation". They can have their own dependents such as *jiddan* "very" which cannot cooccur with nouns. Thus, the distribution of Arabic adjectives will be argued to differ from that of nouns.

Moreover, although Arabic adjectives can be substantivized and occur as heads of NPs, such occurrence is not without restriction. Although substantivized adjectives occur in other languages such as English or Russian, it is never claimed that adjectives in these languages belong to the class of nouns. Furthermore, the data show that there are four important facts

related to Arabic adjectives occurring as heads in NPs :

1. Arabic substantivized adjectives are generally definite.
2. Arabic substantivized adjectives generally 'refer' to "Human".
3. Arabic substantivized adjectives are generally plural.
4. Arabic substantivized adjectives do not occur frequently, i.e. the substantive function of Arabic adjectives is much less common than the modifying function.

One of the texts surveyed in this study has been chosen at random (*layaali ?alf laylah*, by Najeeb Mahfuz). This time we count the adjectives that occur as heads of NPs - subjects, objects, and prepositional complements. The number of adjectives counted in this text having a modifying function is 1089. The number of substantivized adjectives occurring in the same text is 117. There are 109 definite substantivized adjectives whereas only 8 are indefinite. Moreover, the data also show that substantivized adjectives are generally "Human", i.e. referring to 'people'. Therefore, there is a general tendency in Arabic that restricts the occurrence of substantivized adjectives to those which are definite and "Human".

The generalizations stated about Arabic substantivized adjectives are also found to be useful in other languages such as English, Russian and Japanese. Moreover, it will be noted that although the same problem exists in these languages, i.e. they have substantivized adjectives, it is not suggested that they be included with nouns.

Semantically, nouns can be divided into various orders of entities associated with referential expressions, while adjectives are divided into various orders of states associated with predication expressions. Such semantic differences seem to correlate with the other morphological and syntactic ones and provide clear evidence as to the independent status of Arabic adjectives.

It will be concluded that Arabic adjectives are different from nouns and must be assigned to a separate word class. Therefore, statements advocating the same word class for adjectives and nouns, such as that of Bishai (1971 : 106) or that of Carter (1981 : 249), must be rejected².

4.1.1 Adjectives And Comparison

Arabic adjectives inflect for the comparative and the superlative by taking the prefix *?a-* with some modification of the relevant stem : *kabiir/ ?a-kbar / ?al-?a-kbar* "big/bigger/biggest". Nouns, on the other hand, do not inflect for the Comparative and Superlative. Anderson (1985 :199)³ studies the inflectional morphology in various languages and observes that the only genuinely inherent category of the adjective inflection is apparently that of comparison. Consider the following examples :

- | | | |
|-----|--|--------|
| 1.a | <i>?al-Hayaat-u ?a-jmal-u min ?al-mawt-i</i>
the-life-NOM COM-beautiful-NOM than the-death-GEN
"Life is more beautiful than death." | (J80) |
| 1.b | <i>wa zawj-ii ?a?raf-u ?ar-rijaal-i</i>
and husband-my COM-honest-NOM the-men-GEN
"And my husband is the most honest (among) the men." | (D244) |
| 2.a | <i>Jaqqiqa-hu ?al-?a-kbar</i>
brother-his the-COM-eldest
"His eldest brother". | (J115) |
| 2.b | <i>fi Sadri ?axii-hi ?al-?a-cZam</i>
in the-chest brother-his the-COM-youngest
"In the chest of his youngest brother". | (C107) |

The above examples show that Arabic adjectives inflect for Comparative, as in (1), and Superlative, as in (2). For example, the adjective, *?a-jamal* "more beautiful", in (1.a) is in the comparative and takes the comparative prefix *?a-* whereas the adjective *?al-?a-kbar* "the eldest", in (2.a), is in the superlative and takes both the definite article *?al-* "the" and the comparative prefix *?a-*. However, a noun like *jabal* "mountain", for instance, cannot have such correspondences.

Related to comparison is the notion of gradability. Adjectives are gradable as opposed to nouns which are not. According to Rusiecki (1985 : 3), an English adjective is gradable if it can be substituted for A in (3) :

- (3) a. *Aer* (or : more A) than
b. as A as

ignored by grammarians since it is only marked on the 1st person singular. However, this distinction is realized not only in Arabic but also in other Semitic languages. Moscati (1980 : 107) shows the difference between the two clitics as follows :

Semitic Possessive vs Object Pronouns

1st Person Sg. Pronoun	Akadian	Ugaritic	Hebrew	Syriac	Arabic	Ethiopic
Possessive	-ya, -i	-y	-ii		-ii, -ya	-ya
Object	-ni	-n	-nii	-n	-nii	-nii

Table (1)

Moscati remarks that nouns take the possessive pronouns in the first row whereas verbs take the object pronouns in the second row. Clearly Table (1) shows that all the Semitic languages, except Syriac, distinguish between these two sets of pronouns. The fact that such a distinction exists only in the 1st person singular, does not mean that Semitic languages, particularly Arabic, do not distinguish between these two sets of pronouns. Therefore, any analysis that ignores this fact must be rejected; and the distinction between possessive vs object pronouns must be established since it correlates with other important aspects of these languages such as the distinction between the pronouns that can be attached to nouns as opposed to those that can be attached to verbs and active participles. Therefore, it is completely correct to admit such a difference which can be extended to account for the morphological difference between Arabic nouns vs adjectives. Whereas only nouns can take the possessive pronoun *-ii* adjectives cannot. On the other hand, only verbs and participles can take the object pronoun *-nii* as opposed to nouns and adjectives. This distinction is summarized in Table (2) below :

Adjectives And Possessive vs Object Pronoun

Pronouns	Adjectives	Participles	Nouns	Verbs
Possessive <i>-ii</i>	-	-	+	-
Accusative <i>-nii</i>	-	+	-	+

Table (2)

Table (2) shows that nouns and adjectives are distinguished from each other in that only nouns can take the possessive pronoun *-ii* "my" (*kitaab-ii* "my book", but not **kitaaba-*

nii). Closely related to nouns are the kinship terms, which inflect for possession (*?ab-ii* "my father" *?umm-ii* "my mother", but not **?aba-nii* or **?umma-nii*). It also shows that participles, unlike central adjectives, can take the object pronoun *-nii* "me" (*Daaribu-nii* "hitting-me"); and in this respect the participles are similar to verbs (*Daraba-nii* "he hit me")⁵. Central adjectives take neither the possessive nor the accusative pronouns (**Sacb-ii* **Sacbu-nii* "difficult"). Thus, central adjectives, unlike nouns, do not tolerate the possessive pronoun *-ii* "me". This shows, again, the morphological difference between nouns and adjectives. Similarly Givon (1984 : 62) gives examples from another Semitic language, namely Biblical Hebrew, showing that nouns take possessive pronouns. To quote,

"It is very common in language for pronouns referring to the possessor of the noun to be cliticized as a prefix or suffix on the **noun** (emphasis mine)".

Thus we demonstrated, on a purely morphological basis, that adjectives are different from nouns and, therefore, must be assigned to a separate word class. This clearly shows that the morphological similarities according to which the traditional grammarians include adjectives with nouns is not adequate since both are morphologically different.

4.1.3 Adjectives And The Complementary Definiteness system

To show that the traditional Arab grammarians realized the notion of "complementary distribution" Owens (1988 : 25) ⁶ observes that definiteness in Arabic nouns consists of three complementary forms⁷ :

- a. indefinite suffix *-n* as in *kitaab-un* "a book"
- b. definite prefix *?al-* which does not cooccur with *-n* as in *?al-kitaab-u* "the book" but not **?al-kitaab-un*
- c. nouns in the "Construct Phrase" do not cooccur with *-n* or *?al-* as in *kitaab-u ?al-walad-i* "the boy's book" but not **kitaab-un ?al-walad-i* or **?al-kitaab-u ?al-walad-i*.

Therefore, in the "Construct Phrase" nouns can not take the indefinite *-n* or the definite *?al-* "the". The three terms of this system is viewed as complementary.

However, when we consider the Arabic adjective this system does not hold⁸. Arabic adjectives are different from nouns with respect to (c), although they are similar to nouns with respect to (a) and (b), i.e. Arabic adjectives obey these two generalizations⁹. In this connection the following examples are illustrative :

- 5.a naawala-nii Sanduuq-an Sagiir-an
 gave-me box-ACC small-ACC
 "He gave me a small box." (K111)
- 5.b talaqqaa-ha bi ?ar-riDaa?-i ?al-haadi?-i
 accept-he with the-satisfaction-GEN the-quiet-GEN
 "He accepts it with the quiet satisfaction." (G35)
- 5.c *?al-haadi?-un
- 6.a laqad kaan-at [Salb-at-a ?ar-ra?y-i]
 already was-she solid-F-ACC the-opinion-GEN
 "She was already solid in opinion." (H25)
- 6.b ?imra?at-un sawdaa?-un [naHiil-at-u ?al-wajh-i]
 woman-NOM black-NOM thin-F-NOM the-face-GEN
 "a black woman thin in face ..." (I492)
- 6.c ?inn-hu wasiim-un ?akiy-un [qawiyy-u ?albunyat-i]
 verily-he handsome-NOM clever-NOM strong-NOM the-body-GEN
 "Verily he is handsome clever and strong in the body". (A32)
- 7.a wa ?al-qahwt-u [?an-naadir-at-u ?al-maθiil-i]
 and the-coffee-NOM the-rare-F-NOM the-similarity-GEN
 "And the coffee rare in similarity ..." (J13)
- 7.b ?ibnu-hu [?al-?afTas-i ?al-?anf-i]
 son-his the-flat-GEN the-nose-GEN
 "His son in the flat-nosed ..." (B65)
- 7.c ?al-?aHθiyat-u [?aT-Tawiil-at-u ?ar-raqabat-i]
 The shoes-NOM the-long-F-NOM the-necks-GEN
 "The shoes with long necks ..." (B41)

Examples (5) cause no problem since they show that both nouns and adjectives are

similar with respect to generalizations (a) and (b). In (5.a) the adjective *Sagiiir-an* "small" takes the indefinite *-n* and in (5.b) the adjective *?al-haadi?-i* "the quiet" takes the definite *?al-* "the". Example (5.c) is unacceptable since both markers occur simultaneously.

The examples in (6) show that adjectives, like nouns, obey generalization (c) since the underlined adjectives occurring in the bracketed phrases (the Construct Phrases) take neither *-n* nor *?al-*. However, examples (7), in contrast to (6), are problematic since they show that adjectives can take the definite *?al-* "the" in the "Construct Phrase"¹⁰.

If the above is true, it means that we have either to reject the complementary system we already established or admit that it holds only for nouns. Of course, we cannot reject it since it is true for nouns. However, we can restrict its application to nouns excluding adjectives. Therefore, such a system must distinguish between nouns and adjectives.

4.1.4 Adjectives And The exclamatory *ma*

The exclamatory particle *ma* "how" is generally followed by adjectives rather than nouns. *ma* occurs in 40 examples in the data followed by an adjective, as exemplified in (8) below :

- 8.a *ma* ?ajmal haša ?aS-SabaaH
 how beautiful this the-morning
 "How beautiful this morning is !" (C78)
- 8.b *ma* ?acšab ?al-Hurriyyat bacda jaHiim-i ?al-qabr-i
 how sweet the-freedom after misery-GEN the-grave-GEN
 "How sweet freedom is after the misery of grave! " (D43)
- 8.c *ma* ?abgaD haša ?al-Hadiiθ ?ilay
 how scornful this the-speech to-me
 "How scornful this speech is to me !" (I267)
- 8.d *ma* ?aHla ciijat ?al-fallaaH-i
 how sweet life the-farmer-GEN
 "How sweet farmer's life is !" (J252)

In (8) the underlined adjectives occur in the comparative form following *ma* "how". The adjective is used after the particle *ma* in the sense of "How beautiful ... !" as in (8.a). The underlined adjectives belong to central adjectives. The data show that only central adjectives can follow *ma*. Nouns are excluded from that position¹¹.

4.1.5 Adjectives And The negative *gayr*

The negative *gayr* is followed by an adjective rather than by a noun. The data show that the negative *gayr* occurs in 74 examples preceding predicative as well as attributive adjectives of different types. Consider the following examples :

- 9.a wa zajra-haa gayr ?al-jaariH-i
 and rebuke-her neg. the-stinging-GEN
 "and her unstinging rebuke." (I159)
- 9.b wa bi Harakat-in gayr ?iraad-iyy-at-in wa la jucuur-iyy-at-in
 and with motion-GEN neg. intentional and neg. conscious-F-GEN
 "and with an unintentional and unconscious motion." (I493)
- 9.c ?inna-hu gayr kuf?-in la-ka
 Verily-it neg. appropriate-GEN for-you
 "Verily, it is not appropriate for you." (I335)
- 9.d ma rakib-tu gayra haaða
 neg. rode-I neg. this
 "I rode nothing but this."
- 25.e ?a-gayra ?allah-i tacbuduun
 interr.-neg God-GEN worship
 "Do you worship something else beside God."

In the above examples the negative *gayr* is followed by different types of adjectives : participial, Denominal and Simple, respectively. In (9.a) and (9.b) the underlined adjectives are attributive whereas in (9.c) it is predicative. Nouns, on the other hand, are excluded from that position except when the negative *gayr* is preceded by another negative or by an interrogative as in (9.d) and (9.e) respectively. (Notice that in (9.d) *gayr* is preceded by the negative *ma* and in (9.e) it is preceded by the interrogative *?a-*, therefore, nouns such as

?allah-i "God" follow.

4.1.6 Adjectives And The negative *la* of existence :

Whereas *gayr* is generally followed by an adjective, the negative *la* is generally followed by a noun. The particle *la* negates a substantive as well as a verbal or nominal sentence (cf. Wright 1898 Vol II : 327). In a nominal sentence, which concerns us here, *la* denotes the negation of "existence" of the subject (nafiy ?al-jins) where it is immediately followed by an indefinite subject in the accusative as in (10.a) and (10.b) or nominative as in (10.c) with or without nunation. In this connection the following examples are illustrative :

- 10.a *la cilm-a la-naa*
 neg. knowledge to-us
 "There is no knowledge to us." (5.108)
- 10.b *la rayb-a fii-hi*
 neg. doubt-ACC in-it
 "There is no doubt in it." (2.1)
- 10.c *la lagw-un fii-ha*
 neg. nonsense-NOM in-it
 "There is no nonsense in it (Paradise)" (52.23)
- 11.a *la ?af-jams-u yanbagii la-haa ?an tudrika ?al-qamar-a wa*
 neg. sun-NOM allow for-it that overtake the-moon nor
 ?al-layl-u saabiqu ?an-nahaar-i
 the-night-NOM outstrip the-day-GEN
 "Neither is it allowed for the sun that it should overtake the moon, nor can the
 night outstrip the day." (36.39)

The examples in (10-11) are taken from Quran. The underlined nouns following the negative *la* in (10) are indefinite. In (10.a) and (10.b) they are not nunated while in (10.c) the noun is nunated. There are three conditions on the occurrence of the negative *la* of "existence" (cf. Eid 1988 : 308 Al-naHw Al-muSaffaa "The Pure Grammar") :

1. the order must be subject predicate.

2. the subject and predicate must be indefinite.
3. there is no preposition preceding *la*.

It is noticed earlier that the substantivized subject adjectives are generally definite. Therefore, adjectives cannot be negated by the negative particle *la* of "existence" since it must be followed by indefinite noun. However, (11) shows that a definite noun such as *?af-fams-u* "the sun" can follow the negative *la*. But notice that the negative particle in (11) cannot be that of "existence" since *?af-famsu* "the sun" exists everywhere in this world. The above analysis, if true, provides further evidence as to the distribution of Arabic adjectives which is different from that of nouns.

4.1.7 Adjectives And The maximum-generality words.

To distinguish between nouns and adjectives it is useful to consider some nouns of maximum-generality-of-reference such as *jay?* "thing", *?amr* "matter". Adjectives, unlike nouns, can generally modify such nouns.

- 12.a *θammat jay?-un jamiil-un raa?ic-un yaHduθu*
 there thing-NOM beautiful-NOM wonderful-NOM happens
 "There is something beautiful and wonderful happening." (B31)
- 12.b *naraa jay?-an Tariif-an jiddan*
 we see thing-ACC strange-ACC very
 "We see something strange." (A50)
- 12.c *?inna wujuuda-ka ja?-un mustamirr-un*
 verily presence-your thing-NOM continuous-NOM
 "Verily your presence is something continuous." (A51)
- 13.a *?amr-un muHzin-un jiddan*
 matter-NOM sadening-NOM very
 "a very sadening matter." (G133)
- 13.b *hal kaan ?al-?amr-u mutcib-an*
 question was the-matter-NOM tiring-ACC
 "Was the matter tiring." (A46)
- 14.a *laakinna-hu badaa rajul-an ?asad-an cariiD-an ka?annahu jabalu-un*
 but-he seemed man-ACC lion-ACC wide-ACC like mountain-NOM
 "But he seemed a lion wide man like a mountain."

- 14.b hal kaan ?ar-rajul-u ?asad-an
 question was the-man-NOM lion-ACC
 "Was the man a lion ?"
- 14.c *θammat jay?-un ?asad-un raa?ic-un yaHduθu
 there thing-NOM lion-NOM wonderful-NOM happens

Various adjectives modifying the term *jay?* occur in 36 examples while those modifying *?amr* "matter" occur in 21 examples. The examples in (12-13) show that Arabic adjectives can generally follow and modify general terms such as *jay?* "thing", *?amr* "matter". Nouns as modifiers cannot occur in the adjective position following such general terms. Therefore, example (14.c) is unacceptable. In (14.a) and (14.b) the noun *?asad* "lion" modifies the preceding noun *-rajul-* "man" who is understood to have the property of a lion.

This shows that even when nouns have a modifying function, they are different from adjectives since they cannot modify such general terms, therefore, when the noun *?sad* modifies *jay?* in (14.c) the example is ruled out. Thus, in (12-13) a noun cannot occur in the position of the double-underlined adjectives and modify the preceding general terms¹².

4.1.8 Adjectives And Permutation

In this section we will discuss a structure called *badal ?al-?ishtimaal* "the comprehensive substitution" in which adjectives cannot occur¹³. This type of permutation is defined by Wright (1898 Vol II : 285-6) as "the permutation which indicates a quality or circumstance possessed by or included in the preceding substantive" (Wright Vol II : 285), as shown in (15). Now consider the following examples which are due to Hasan (1976 Vol III : 669) and to Wright (1898 Vol II : 286)

- 15.a bahara-nii cumar-u cadlu-hu
 amazed-me Omar-NOM justice-his
 "Omer's justice amazed me."

(Hasan)

- 15.b *raaqa-nii mucaawiyat-u Hilmu-hu*
 satisfied-me Muawiya-NOM patience-his
 "Muawiya's patience satisfied me." (Hasan)
- 15.c *?acjaba-nii zayd-un cilmu-hu*
 surprised-me Zayd-NOM learning-his
 "Zayd's learning surprised me." (Wright)
- 15.d **raaqa-nii mucaawiyat-u Haliim-hu*
- 15.e *raaqa-nii mucaawiyat-u ?al-Haliim-u*
 satisfied-me Muawiya-NOM the-patient-NOM
 "The patient Muawiya satisfied me."

In Arabic the double-underlined nouns in (15) are called *badal* "permutative". Hasan (Vol III : 670) observes that there are two characteristics for such nouns :

1. They must take a pronoun referring to the antecedent nouns (the underlined nouns in (15)).
2. They are redundant in the sense that their omission does not affect the grammaticality of the relevant sentence.

The double-underlined nouns in (15) take the boldface pronoun *-hu* "his" which refers to the corresponding underlined antecedent nouns. Thus the pronoun *-hu* "his" in (15.b), for instance, is in the 3rd person Sg. M. since it refers to its antecedent *Muawiya*. Example (15.d) is similar to (15.b) except that in the former the permutative is an adjective rather than a noun, therefore, the example is unacceptable. Although an adjective occurs in the permutative position in (15.e), the example is acceptable. But notice that (15.e) is not an "existential" *badal* structure since the adjective *?al-Haliim-u* "the patient" does not take a pronoun referring to the antecedent noun *Muawiya*. This clearly shows that adjectives, unlike nouns, cannot occur in the *badal* of "existence" structure in the position marked by

—
 [NP_j —+Pronoun_j]

The above representation shows that there must be a pronoun referring to the antecedent noun, therefore adjectives are excluded from that position ¹⁴.

Earlier, we have seen that nouns are excluded from certain positions such as the position following the interrogative *ma*, the negative *gayr*. The *badal* structure, like the negative particle *la* of existence, provides further evidence showing that adjectives are excluded from such positions. This clearly shows that the distribution of adjectives is different from that of nouns, consequently they should be assigned to different word classes.

4.1.9 Adjectives And Subcategorization

Syntactically there are some diagnostic criteria often used to identify English adjectives such as strict subcategorization, coordination and cooccurrence with various degree modifiers¹⁵. English adjectives occurring as predicate complements to 'linking' verbs such as *seem*, *become*, *look*, *act*, *turn*, *feel*, etc. provide a classic test for the category of adjectives (cf. Maling 1983 : 255). Another characteristic adjective position is 'object complement' to transitive verbs like *consider*. Subcategorization frames are usually stated in terms of syntactic categories such as the following :

become, [__ AP]

consider, [__ NP AP]

Thus we can have the following examples :

16.a He seems happy.

16.b She looks sad.

16.c They considered John brave.

But this test is not without problems. In this connection consider the following examples from Arabic and English.

17.a bada ?al-?amr-u bacda fatratin saxiif-an wa mumill-an
seemed the-matter-NOM after while silly-ACC and boring-ACC

"The matter seemed after a while silly and boring."

(A30)

18.a The matter seems out of hand.

18.b They consider him the president of the club.

In (17) the underlined elements must occur in the indefinite accusative, therefore, it is similar to the Arabic adverbs. However, adverbs cannot occur as complements to verbs like *bada* "seemed". The categorial status of these elements does not concern us here. The point I wish to make is that such a test is not without problems. Moreover, example (18) show that not only APs can occur in that position but also PPs and NPs. In (18) the underlined elements are not adjectives; they are PP and NP respectively. This clearly shows that subcategorization on a syntactic basis only is not adequate¹⁶.

A possible alternative is the grammatical functions (predicate complement). Bresnan (1982), for example, introduces 'XCOMP' which means a predicate complement of the category X. Thus 'XCOMP' can be either a subject or an object predicate (as with *seem* and *consider* respectively). But even this alternative is not enough to exclude PP from that position. Therefore, some additional semantic features are required. A feature like 'Gradable Predicate' may be suitable where gradability cuts across syntactic categories (cf Rusiecki 1985 : 3)¹⁷. Therefore, categorial identity is not a sufficient condition for subcategorization nor is it sufficient for coordination used as a syntactic test for adjectivehood, since semantic identity is required. This, however, should not weaken the strict syntactic criteria since it only shows that subcategorization frames can provide perfect results if semantic facts are taken into consideration. "The congruence between a semantic and syntactic characterization should cause no surprise - it would be more surprising if there were a complete mismatch" (cf. Brown and Miller 1980 : 100). However, this is not to deny the strict syntactic tests since they also provide perfect criteria. In Arabic it has been argued earlier that syntactic criteria such as the exclamatory *ma*, the negative *gray*, the intensifier *jiddan* "very", and the cooccurrence restriction provide strict syntactic evidence according to which adjectives are distinguished from nouns.

Moreover, Arabic adjectives can have their own obligatory complements with which they form a strong relationship, i.e. the adjectives subcategorize for such elements¹⁸. The

examples in (19) below show that the underlined elements are obligatory since their omission results in ungrammaticality. That is, the adjectives *jadiir-at-un* "appropriate", and *?af-faguuf* "the-fond" are heads of the corresponding bracketed APs, in which they take their own obligatory complements.

- 19.a haðihi ?al-kurraasat-u _{AP}[*jadiir-at-un* bi ?iSlaaH-i ?al-xaTa?-i]
 this the-notebook-NOM appropriate with repair-GEN the-wrong-GEN
 "This booknote is appropriate for the repair of the wrong." (7911)
- 19.b ?al-Hallaaq _{AP}[*?af-faguuf* bi dassi ?anfi-hi fi kulli fay?in]
 the-barbar the-fond of hiding nose-his in every thing
 "The barbar (who is) fond of hiding his nose in every thing ...". (D13)

Moreover, the examples in (20), below, show that the omission of the adjectives themselves results in ungrammaticality since the following elements depend on the adjectives for their occurrence, i.e. the adverb *jiddan* "very" cannot occur without a preceding adjective. (Notice that *jiddan* is not a sentential modifier). Another way of looking at this is that in the adjective phrase (adjective + Adverb) the adjective can function in a manner equivalent to the whole construction of which the adjective is a part (cf. Quirk 1985 : 61). In this connection the following examples are illustrative.

- 20.a wa ?ana [*saciid-un* jiddan]
 and I happy-NOM very
 "And I'm very happy." (A27)
- 20.b * wa ?ana [jiddan]

4.1.10 Adjectives And Coordination.

One of the diagnostic criteria often used to test a syntactic category is coordination, based on the assumption that only elements of the same syntactic category can be conjoined¹⁹. Quirk et al (1985 : 46) observe that :

"two or more units of the same status on the grammatical hierarchy may constitute a single unit of the same kind."

But it is not generally possible to predict, on the basis of syntactic categories, whether or not two constituents can be coordinately conjoined²⁰. On the other hand, in the majority of cases acceptable coordinately conjoined elements are assumed to belong to the same syntactic category on independent grounds, i.e. the various tests suggested above provide independent evidence that Arabic adjectives and nouns belong to different classes. But does this mean that the generalization regarding the syntactic identity of the coordinately conjoined constituents is not valid? The answer comes from Schachter (1977) who states that "such exceptions do not invalidate the generalization that coordinate conjunction requires category identity, but rather show that our assumptions about categorization may require some refinement".

Later in this section we will see what Schachter means by 'refinement'. Although coordination is not a very reliable test, it provides evidence showing that adjectives and nouns must be distinguished²¹. Consider the following examples.

- 21.a kun-ti jamiil-at-an wa qawiyy-at-an
 were-you F. beautiful-F-ACC and strong-F-ACC
 "You were beautiful and strong." (G82)
- 21.b ?aqdaam-un baTii?-at-un wa θaqaal-at-un ?istaθaarat θikrayaat-an
 feet-NOM slow-F-NOM and heavy-F-NOM provoked memories-ACC
 gaamiD-at-an
 ambiguous-F-ACC
 "heavy and slow feet provoked ambiguous memories." (I323)
- 21.c ?aHadu-humaa θaabit-un wa ?al-?aaxar-u mutaHarrik-un
 one-both steady-NOM and the-other-NOM moving-NOM
 "One of them is steady and the other is moving." (F44)
- 21.d la yumkin ?an tajhal ?al-culuum-a ?an-naZariyy-at-a wa
 neg possible that ignore the-sciences the-theoretical-F-ACC and
?at-taTbiiqiyy-at-a
 the-practical-F-ACC
 "It is impossible that you ignore the theoretical and practical sciences." (C183)

22.a *ʔaHaduhuma walad-un wa ʔal-ʔaaxar-u Tayyib-un

There are 130 examples occurring in the data in which adjectives of different types are coordinately conjoined. In (21) each example contains the coordinating conjunction *wa* "and" which conjoins constituents belonging to the same syntactic category²². In (21.a) and (21.b) the underlined coordinately conjoined elements are Simple adjectives, in (21.c) they are Participial and in (21.d) they are Denominal. In (21.a), for instance, the underlined conjuncts *ʔaabit-un* "fixed" and *mutaHarrik-un* "moving" are "of the same type" (adjectives), therefore, their conjunction is acceptable. In the case of (22.a), the underlined conjuncts *walad-un* "boy" and *Tayyib-un* "nice" are not of the same type, therefore, their conjunction is unacceptable. One obvious suggestion is that the relevant constituents in (21), unlike those in (22), must belong to the same syntactic category. This shows that adjectives and nouns belong to different categories.

The coordination test seems to be true for other syntactic categories. For example, (23.a) and (24.a) show the grammatical coordination of two NPs, i.e. NP1 and NP2, as opposed to their corresponding ungrammatical examples in (23.b) and (24.b). In (23.b) the underlined adjective *ʔal-mutaʔajjij-at-u* is coordinated with the following adverb *jiddan* "very". (24.b) is ungrammatical because the underlined noun *ʔal-waHdat-i* "the solitude" is coordinately conjoined with the adjective *ʔaT-Tayyib-at-i* "the nice". In (25) the underlined conjoined elements are of the same types, namely verbs. This shows that the coordinated elements should be of the same type.

23.a NP1[ʔal-cawaaTif-u ʔal-mutaʔajjij-at-u] wa NP2[ʔal-Hubb-u ʔal-camiiq-u]
the-emotions-NOM the-burning-F-NOM and the-love-NOM the-deep-NOM
"the burning emotions and the deep love." (K44)

23.b *ʔal-cawaaTif-u ʔal-mutaʔajjij-at-u wa [*jiddan*]
very

24.a ʔal-cawdat-u ʔila ʔal-waHdat-i wa ʔal-waHʔat-i
the-return-NOM to the-solitude-GEN and the-cheerlessness-GEN
"the return to the solitude and the cheerlessness." (J91)

24.b *ʔal-cawdat-u ʔila ʔal-waHdat-i wa ʔal-Tayyib-at-i
the-solitude-GEN and the-nice-F-GEN

25. ?irtajjat ?al-?acSaab-u wa wajafat ?al-quluub-u
trembled the-nerves-NOM and agitated the-heart-NOM
"The nerves trembled and the hearts agitated." (J100)
- 26.a ?akal-tu ?at-tufaaHat-a sariican wa bi fahiyyat-in qawiyy-at-in
ate-I the-apple-ACC quickly and with appetite-GEN strong-F-GEN
"I ate the apple quickly and with a strong appetite."
- 26.b * Zayd-un wa ?al-riyaaH-u fataH-aa ?al-baab-a
Zayd-NOM and the-wind-NOM opened-Dual the-door-ACC
"Zayd and the wind opened the door."

However, (26) show that the syntactic identity is not necessary between the coordinately conjoined constituents, and therefore, such a notion needs clarification. In (26.a) the adverb *sariican* "quickly" is coordinately conjoined with the prepositional phrase *bi fahiyyat-in qawiyy-at-in* "with strong appetite" and the example is perfectly grammatical. On the other hand, although the two coordinately conjoined elements in (26.b) are of the same type since both are nouns : "Zayd and the wind", the example is unacceptable.

This brings us to what Schachter suggests as a 'refinement' of the coordination identity category. The refinement suggested by Schachter is what he calls the "Coordinate Constituent Constraint" according to which "the constituents of a coordinate construction must belong to the same syntactic category and have the same semantic function". Schachter observes that sentences like (27), below, cannot be excluded on semantic grounds, therefore, both syntactic and semantic conditions are included in his constraint. Moreover the semantic function requirements on coordination will not be met in a transformational grammar analysis in which coordination must take place in a syntactic component, where the semantic functions are not available; this will lead to an overgeneration of coordinating constructions, from which the ungrammatical cases will have to be filtered out after semantic functions have become available at some point in the semantic interpretation.

- 27.a *What are you doing and shut the door.
27.b *John ate with his mother and with strong appetite.

Schachter relates his constraint to what Grosu (1972 : 2) calls "perceptual complex" which suggests that "complexity arises when two sets of cues assign contradictory values to a stimulus in terms of some parameter" and dictate the avoidance of such contradictory assignment values²³. Thus, if the coordinately conjoined constituents are different with respect to their syntactic category or semantic function, they are simultaneously being assigned the value 'equal' and 'unequal', and the result is perceptual conflict. Thus the coordinately conjoined items must be identical in syntactic category and semantic function. Therefore, if two constituents do not satisfy these requirements, but nonetheless occur in a structure which can only be interpreted as coordinate, the result is understandably anomalous because it is impossible for two constituents to be simultaneously of equal and unequal rank (cf. Schachter 1977).

4.2.1 Arabic Adjectives As Heads of NPs :

In this section we will argue that although Arabic adjectives can occur as heads of NPs, such occurrences should not be taken as an evidence against assigning Arabic adjectives to a separate class which is different from that of nouns. This is because the occurrence of substantivized adjectives is severely restricted. Therefore, such occurrence should not be considered to contradict with the above criterial tests which show that Arabic adjectives are different from nouns.

Like English adjectives, Arabic adjectives can function as heads of NPs which are subject, object or prepositional complement. Quirk et al (1985 : 421) note that English substantivized adjectives do not inflect for number or for the genitive case and they usually require a definite determiner. On the other hand, Arabic substantivized adjectives have similar restrictions. The data show that there are three important generalizations which seem to govern the occurrence of Arabic substantivized adjectives :

1. Substantivized adjectives are generally definite.
2. Arabic substantivized adjectives do not occur frequently, i.e. the substantive function of Arabic adjectives is much less common than the modifying function.
3. Substantivized adjectives generally refer to people.
4. Substantivized adjectives are generally plural.

These generalizations are obtained from the 117 substantivized adjectives collected from *Layaali ?alf Laylah* by Najiib MaHfuuz, which is picked up randomly. The result is summarized in Table (3) which shows that there are 109 definite substantivized adjectives as opposed to 8 indefinite substantivized ones. Most of these 8 indefinite adjectives are subject, therefore, substantivized subject adjectives are further divided into definite and indefinite. It is found that there are only 6 indefinite subject adjectives as opposed to 43 definite.

Table (3) also shows that most of these adjectives (95.7%) refer to 'people', i.e. Human. It also shows that 27.3 percent of these adjectives is plural. This shows that substantivized Arabic adjectives are generally definite and refer to human beings with a tendency towards occurring in the plural. Because of these restrictions the occurrence of these adjectives is much less frequent than the occurrence of those adjectives that modify head nouns and occur in the same text as shown in Table (3).

Substantivized And Non-substantivized A. Occurring in *Layaali ?alf Laylah*

Features	Substantivized Adj.		Non-substantivized Adj.	
	No of Adj.	Percentage	No of Adj	Percentage
Definite	109	93.2	478	43.9
-Definite	8	6.8	611	56.1
Human	112	95.7	185	17.0
-Human	5	4.3	904	83.0
Plural	32	27.3	99	9.1
-Plural	85	72.7	990	90.9
TOTAL	117		1089	

Table (3)

In Table (3) the total number of the substantivized adjectives occurring in *layaali ?alf laylah* is 117 (9.7%) as opposed to 1089 (90.3%) non-substantivized adjectives. This

means that Arabic adjectives may occur as heads of noun phrases, however, such occurrence is very limited. It also means that the main function of the Arabic adjectives is to modify a preceding head noun either predicatively or attributively. This shows that the generalizations we stated above are correct.

Table (3) also shows that the features [+Definite] and [+Human] are very important for substantivized adjectives since in each case the percentage of these two features (93.2% and 95.7% respectively) is much more than the corresponding negative features (6.8 and 4.3 respectively). A closer look at the exceptions, the 8 [-Definite] and the 5 [-Human] substantivized adjectives, shows that all the 5 non-human adjectives are [+Definite]. This means that the occurrence of the five [-Human] substantivized adjectives can still be excluded by the other generalization, namely [+Definite]. It also means that the generalization related to definiteness is stronger than that related to "reference to people", i.e. "Human". Of all the 117 adjectives only 2 (1.7%) are [-definite] and [-human], i.e. these two occurrences cannot be excluded by either of the generalizations. Therefore, these two statements cannot be understood as absolute rules giving a clear cut distinction, but rather as strong generalizations.

To test the validity of the above two generalizations and to prove that these two occurrences are exceptional we will consider the non-substantivized adjectives occurring in the same text. The number of the non-substantivized adjectives which are both [-Definite] and [-Human] is 471, that is 43.6% as opposed to 1.7% of the corresponding substantivized ones. This clearly shows that the occurrence of indefinite non-human non-substantivized adjectives is definitely normal, but the same occurrence for the substantivized adjectives is not normal and should be treated as exceptional.

While the features [+Definite] and [+Human] are very important for the substantivized adjectives, they are irrelevant for the non-substantivized ones. In contrast with the substantivized occurrence, Table (3) shows that the occurrence of the non-substantivized adjectives whether indefinite (56.1%) or non-human (83.0%) is much more than that of the corresponding definite (43.9%) or human (17.0%).

Table (3) shows that there are 27.3 percent "plural" substantivized adjectives as

opposed to 9.1 percent non-substantivized plural. However, although this feature seems to be more significant for substantivized adjectives, it is not as important as the other two features. Therefore, the tendency for the substantivized adjectives to be plural is not as strong as the features of "definite" and "Human".

The above analysis clearly shows the importance of the features [Definite] and [Human] for substantivized adjectives. Although Arabic adjectives can be substantivized to occur as heads of NPs, such occurrence is restricted to those which are definite and refer to human beings, and should not be used as an argument for including the class of Arabic adjectives with nouns as presented in the traditional grammar books and in the analysis of some Arabist linguists. This statistical analysis of the Arabic data seems to be true for other languages such as English, Russian and Japanese. This will be discussed in the following sections.

4.2.2 English Adjectives as Heads of NPs :

Like Arabic, English adjectives can function as heads of noun phrases, and thus can be subject, object and prepositional complement. Quirk et al (1985 : 421) observe that English adjectives as heads of noun phrases "do not inflect for number or for the genitive case and they usually require a definite determiner". Consider the following examples :

- 28.a The innocent came to court.
- 28.b I gave the poor some money.
- 28.c There is a lack of communication between the young and the old.

The underlined adjectives in (28) occur in the positions considered to be criterial for nouns. They are central adjectives since they can occur attributively, predicatively, can be modified by an intensifier such as *very*, and have comparative and superlative forms. However, they occur as subject, object and prepositional complement respectively.

Brown and Miller (1980 : 236 et passim) suggest four different solutions and note that each has its own drawbacks. These solutions are summarized in the following :

1. For the adjective *poor*, for example, there are two distinct but homophonous items

POOR (1), an adjective, and POOR (2), a noun. However, the problem is that POOR (2) still retains some adjective-like properties.

2. POOR is an adjective which can be 'recategorised' as a noun in certain kinds of structure. Brown and Miller noted that not all adjectives can be recategorised hence a statement in the lexicon must be added.
3. POOR is an adjective which is derived by a transformational deletion rule from structure like "those who are poor". It is noted that the underlying structure could be anything, e.g., "I wanted the black" could be the black ball, the black dress, etc. since the understood reference depends on the context.
4. POOR functions as the head of an NP, and the NP rule can be relaxed to allow adjectives in certain circumstances to take on this syntactic function. However, under the NP solution a distinction must be made between the syntactic function of a form, as head of NP, AP, etc, and its syntactic class as noun, adjective, etc.

Brown and Miller correctly assert that "there is no unique satisfactory solution. Some instances are best handled in one way, others in another". However, although English adjectives can occur as subjects, objects etc. it is never suggested by Brown and Miller that they have no separate word class. This is because the general distribution of the class of adjectives is different from that of nouns, and their occurrence as heads of NPs is not typical. Thus English central adjectives such as "poor" may have substantive function and occur as heads of NPs, however such occurrence seems to be restricted since such adjectives are generally definite and refer to people. Is the occurrence of substantivized adjectives in Arabic restricted as well ? To answer this question we will turn to the Arabic data.

4.2.3 Substantivized Adjectives are Definite :

The statistics given above in Table (3) show that modification is the typical function of Arabic adjective. There are 1089 adjectives occurring in *layaali ?alf laylah* whereas there are 117 substantivized adjectives. This clearly shows that Arabic adjectives occurring as

heads of noun phrases are much less than those which occur in the typical position of adjectives : attributive and predicative modifying a preceding head noun. This also shows that both nouns and adjectives can occur in the same position. However, adjectives occurring as heads of NPs are less frequent and more restricted since they are generally definite and refer to human beings. Some are plural²⁴. While the occurrence of nouns as definite or indefinite neither results in unacceptability nor causes ambiguity, the occurrence of substantivized adjectives, whether definite or indefinite, either results in unacceptability or causes ambiguous structure. Consider the following examples :

- 29.a wa huwa subHaanahu yuHaakimu ?al-qawiyy-a min xilaal-i quwwati-hi
and he glorified punishes the-strong-ACC_j through strength-his_j
"And he, the Lord, punishes the strong according to his strength." (D257)
- 29.b *wa huwa subHaanahu yuHaakimu qawiyy-an min xilaal-i quwwati-hi
and he glorified punishes strong-ACC_j through strength-his_j
- 29.c wa huwa subHaanahu yuHaakimu qawiyy-an min xilaal-i quwwati-hi
and he_j glorified punishes strongly-ACC through strength-his_j
"And he, the Lord, punishes strongly according to his strength."
- 30.a ?ar-raa?iH-uun wa ?al-gaad-uun yanZur-uun ?ilay-hi
the-coming-NOM.Pl.M. and the-going-NOM. Pl. look-Pl.M. at-him
"The comers and the goers look at him." (D66)
- 30.b *raa?iH-uun wa gaad-uun yanZur-uun ?ilay-hi
coming-NOM.Pl.M. and going-NOM.Pl.M. look-Pl.M. at-him
"They, coming and going look at him."
- 30.c raa?iH-iin wa gaad-iin yanZur-uun ?ilay-hi
coming-ACC.Pl.M. and going-ACC. Pl. look-Pl.M. at-him
"They, coming and going, look at him."

Example (29.a) shows that definite adjectives can occur as object. In (29.a) the underlined adjective *?al-qawiyy-a* "the strong" is the object, therefore, it takes the accusative marker *-a* . It is also definite since it takes the definite article *?al-* "the". The same adjective occurs in (29.b) but without the definite article, and the example is unacceptable. Arabic "free participial modifiers" and adjectives can have the same form, however, the former must be indefinite and accusative. In (29.c) the underlined element must be interpreted as a "free participial modifier" and therefore, it is acceptable. Moreover,

for those who would argue that (29.b) is acceptable, they have to admit that without the coindexing markers (29.b) and (29.c) are identical and the example is ambiguous between two readings : one as in (29.b) and the other as in (29.c), consequently, substantivized adjectives when indefinite are ambiguous.

While the underlined adjective in (29.a) is the object, those in (30.a) are the subject of the sentence. In (30.a), although the subject is the underlined definite participial adjectives, *?ar-raa?iH-uun wa ?al-gaad-uun* "the coming and the going", the example is acceptable. On the other hand, when the same elements are indefinite, as in (30.b), the example is unacceptable. Notice that (30.b) cannot have two readings, i.e. it cannot have a "free participial modifier" reading. To have this reading the underlined adjectives must occur in the accusative as in (30.c).

Examples (29-30) show that substantivized adjectives are generally definite but when they are indefinite they are either unacceptable or the resulting structure is ambiguous. Moreover, they also show that substantivized adjectives refer to 'human', This is evidenced by considering (29-30) in which what is understood "to be punished by God" is 'human, and what is understood "to look at him" is also 'human'. Such a restriction, as we noted in Table (3) is in 95.7 percent of the substantivized adjectives.

Unlike substantivized adjectives, subject or object nouns can occur freely definite or indefinite. Moreover, they can cause no ambiguous structure. In this connection the following examples are illustrative :

31.a ja?a rajul-un / ?ar-rajul-u

31.b ra?ay-tu rajul-an / ?ar-rajul-a

In (31) the underlined nouns may be definite or indefinite as subject or object as in (31.a) and (31.b) respectively. If the above analysis is correct, it clearly shows that the distribution of Arabic adjectives as heads in NPs is severely restricted. Adjectives as heads of NPs tend to be definite rather than indefinite.

But why Arabic as well as English substantivized adjectives are generally definite. To answer this question we will consider Declerck (1986 : 29) who observes that there are two

basic differences between definite and indefinite as the following :

1. The use of the definite NP implies that the object referred to is uniquely defined for the speaker and is uniquely identifiable for the hearer. The use of the indefinite NP, on the other hand, does not imply this.
2. Definite NPs suggest an inclusive interpretation.

Moreover, Declerck (1986 : 31) distinguishes between referential and non-referential NPs and remarks that :

"As far as such NPs are concerned, the meaning of definiteness appears to be that the property expressed by the nonreferential NP is represented as uniquely determining."

Therefore, the definite property NP in (32.a) denotes the complete set of objects that have the property in question and "the property uniquely determines" *Maajid and Saalih* , whereas the indefinite property NP in (32.b) does not. In (32.b) there is no implication that the indefinite property denotes the complete set of 'good players' and therefore it is 'exclusive' as opposed to (32.a) which is "inclusive".

32.a *Maajid and Saalih are the good players*

32.b *Maajid and Saalih are good players.*

This, if true, shows why substantivized adjectives are generally definite rather than indefinite. Thus a substantivized adjective uniquely determines the reference which, as discussed above, is definite and human, i.e. these two features show that the reference is "uniquely determined".

4.2.4 Substantivized Adjectives are "Human" :

Related to the definite (inclusive) indefinite (exclusive) distinction is the fact that most of the substantivized Arabic adjectives in the data (cf. Table 3) are generally applied to people. Out of the 117 substantivized adjectives there are only 5 adjectives applying to nonhuman. They are ordered according to their occurrence in the data as follows :

(33)

<i>?almajhuul</i>	"the unknown" (which occurs 3 times),	(D13), (D120)
<i>?al-?aswad wa ?al-?abyaD</i>	"the black and the white",	(D48)
<i>?al-faaniy</i>	"the vanishing"	(D216)
<i>?al-daa'fic</i>	"the stimulating or the stimulus",	(D227)

Consider the following examples.

- 34.a naaH-at munaajiyatan ?al-majhuul-a
 cried-she talking the-unknown-ACC
 "Talking to the unknown, she cried." (D120)
- 34.b jamaca qalbu-hu bayna ?al-?aswad-i wa ?al-?abyaD-i
 combined heart-his between the-black-GEN and the-white-GEN
 "His heart combined the black and the white (the evil and the good)." (D48)

The underlined participial adjective in (34.a), *?almajhuul* "the unknown", and the Simple adjectives in (34.b), *?al-?aswad wa ?al-?abyaD* "the black and the white" do not refer to people. However, they are definite since they take the definite article *?al-* "the". Although the above five substantivized adjectives are not used to refer to people, they are consistent with the other generalization, namely the definite occurrence since they all take the definite article *?al-* "the".

Therefore, it can safely be concluded that substantivized adjectives in Arabic are restricted in their occurrence, consequently they have much less occurrence than those with a modifying function (117/1089). The restriction seems to be semantic in nature since they are generally definite and apply to a human reference²⁵. This restriction on Arabic substantivized adjectives can be extended to account for similar adjectives in other languages. Quirk et al (1985 : 421) observe that English substantivized adjectives require a definite determiner. And Wierzbicka (1986 : 362) remarks that English substantivized adjectives apply to people :

"English colour adjectives can be applied to all visible entities, but expressions such as *the blacks* , *the reds* can only apply to **people** (emphasis mine), and, moreover, to well specified categories of people (Negroes communists)".

Therefore, English substantivized adjectives, like the Arabic ones, apply to people.

Wierzbicka also remarks that her observation is true for other languages such as Russian and Japanese. In this connection consider examples (35) and (36) from Russian and Japanese respectively²⁶ :

- 35.a *staryi slepoj kot*
 "(an) old blind cat".
- 35.b *slepoj ulybnulsja*
 "(the) blind (person) smiled".
- 35.c * *slepoj pokacal xvostom*
 "(the) blind (one) wagged (his) tail". (non-anaphorical)
- 36.a *mekkura no hito*
 "(a) blind person"
- 36.b *mekkura no inu*
 "(a) blind dog"
- 36.c *mekkura ga waratta*
 "(the) blind (person) smiled"
- 36.d * *mekkura ga shippo o hutta*
 "(the) blind (one) wagged (his) tail".

Wierzbicka observes that Russian adjectives such as *slepoj* "blind" in (35.b) and Japanese adjectives such as *mekkura* "blind" in (36) can apply to animals as well as to people. However, when substantivized they seem to apply only to people, therefore, (35.c) and (36.d) are unacceptable.

Thus, according to Wierzbicka, substantivized adjectives in many unrelated languages such as English, Russian and Japanese apply to people. The Arabic data seem to provide further evidence as to the correctness of this generalization.

4.2.5 Substantivized Adjectives are "Plural" :

The Arabic data show, as in Table (3), that 27.3 percent of the substantivized adjectives are plural as opposed to 9.1 percent of the non-substantivized adjectives. Therefore, examples such as those in (37) are more frequent than the former.

- 37.a Halima ʔal-fuqaraaʔ-u bi maTarat-in munhamir-at-in (D120)
 dreamed the-poor-NOM of rain-GEN pouring-F-GEN
 "The poor dreamed of a pouring rain." (D120)
- 37.b ʔistaʃhada ʔaf-jurafaaʔ-u wa ʔal-ʔatqiyaaʔ-u
 died the-honest-NOM and the-piou-NOM
 "The honest and the pious died." (D1)

In (37) the underlined elements are substantivized adjectives occurring in the plural form. These are central members of the adjective class satisfying the relevant criterial features for central adjectives. The examples show that some of the substantivized adjectives occur in the plural but such occurrence is not very common. Therefore, it cannot be claimed that Arabic substantivized adjectives are generally plural.

Similarly English adjectives occur in the plural when substantivized. Wierzbicka (1986 : 365) observes that :

"Adjectives are much easier to use as nouns (i.e. in referring expressions) in the plural than they are in the singular."

Although English adjectives cannot inflect for number, they usually take plural concord when substantivized as noted by Quirk et al (1985 : 283, 421-423) :

"Adjectives [...] can be noun-phrase heads (*the young*) with plural and generic reference denoting classes, categories, or types of people. [...] Notice that these adjectives are restricted to generic reference and take plural concord. Hence, *the poor* cannot denote one person."

In examples such as : *The poor are causing no problems* the plurality feature is clear since there is a plural verb. However, this is not to say that the singular is impossible since examples such as *The poor man* are acceptable but they, unlike the previous ones, can have either specific or generic reference (cf. Quirk (1985 : 422). Thus, like the substantivized Arabic features of "Definiteness" and "Human" reference, the feature of "Plurality" noted in the Arabic data seems to exist in English substantivized adjectives which makes our observation still stronger.

To sum up, it has been discussed that Arabic adjectives differ morphologically and syntactically from nouns. Some important criterial tests have been developed in order to

prove the point. Morphologically it has been discussed that Arabic adjectives, unlike nouns, inflect for the comparative and superlative, do not take the possessive clitic *-ii* "my", nor do they obey the complementary definiteness system. Syntactically it is shown that the distribution of Arabic adjectives differ from that of Arabic nouns with respect to some important tests such as the exclamatory *ma*, the negative *gayr*, the negative of "existence" *la*, the maximum generality words, the permutation structure and coordination. Because of all these morphological and syntactic differences Arabic adjectives must be assigned to a separate word class.

Moreover, the occurrence of Arabic substantivized adjectives is not left without explanation. On the basis of data taken randomly from one of our texts, it is shown that Arabic adjectives can be substantivized and occur as heads of NPs as subjects, objects or prepositional complements. It is noted that such occurrence is neither frequent nor typical; and therefore, it is not without restriction. Comparing the non-substantivized and the substantivized adjectives which occur in the same text (*Layaali ?alf Laylah*) shows that the former are much more frequent and without any restriction. On the other hand, the latter type (substantivized) seems to be less frequent, definite, refer to 'people' and can be plural. These restrictions seem to account for the occurrence of substantivized adjectives in other languages which makes our generalizations even stronger.

The occurrence of Arabic adjectives as heads of NPs should not be taken as an evidence indicating that in Arabic both nouns and adjectives occurring as subjects, objects or prepositional complements are similar and must be included in the same class. This is because such substantivized occurrence is not without restrictions. Moreover, although other languages such as English, Russian and Japanese do have substantivized adjectives, it is never suggested that adjectives in these languages should be included with nouns. On the contrary, adjectives in these languages are analyzed in a class separate from nouns. Therefore it can be concluded that Arabic adjectives are different from nouns and must be in a separate class.

4.3 Semantic Characteristics :

What is the semantic difference between adjectives and nouns? The traditional answer is that while nouns designate 'substances' adjectives designate 'qualities'. However, although the boundary between the two classes is arbitrary, i.e one cannot distinguish a noun from an adjective on purely semantic grounds, once the two classes are distinguished formally, it could be said that each class has a semantic core according to which they are identified. Therefore the semantic distinction between Arabic adjectives and nouns discussed in this section is to be understood as an evidence supporting the grammatical distinction established earlier between the two classes. This is why Miller (1985 : 207) observes that :

"The essence of the whole enterprise is that the syntactic categories are defined extensionally on distributional grounds and the semantics is filled in, not in complete independence of syntax, but partly on independent grounds and partly on the basis of the syntax."

Similarly Lyons (1977 : 440) observes that the semantic part of the traditional definitions of the part-of-speech presupposes the possibility of identifying entities, properties, actions, relations, etc., independently of the way in which these are referred to or denoted in particular languages. But once the grammatical categories are decided on formal basis it can be stated that there is a correlation between them and the various semantic classes. To quote :

"it is an empirical question whether there will be any positive correlation between grammatically defined and semantically defined expression-classes in particular languages. The answer to this question would seem to be that in all languages that have been investigated and reported upon, there is a correlation between the grammatical and semantic classification of expressions. Furthermore, the fact that there is a high degree of correlation between the grammatical and the semantic classification of expressions obviously facilitates the child's acquisition of the native language." (cf. Lyons (1977 : 449))

Since the semantic classifications of expressions is important we will discuss them with respect to nouns and adjectives and note how the two differ semantically.

4.3.1 The Referential Expressions :

Lyons (1977 : 442) divides nouns into three-order entities and remarks that "physical objects" (persons, animals, things) are first-order entities which are typically located at any point in time in what is at least psychologically a three-dimensional space, and publicly observable. Thus, nouns like *walad* "boy", *kalb* "dog", *kitaab* "book", and *kursi* "chair", are referred to as common concrete nouns and by this criterion first-order nouns : "they are lexemes that denote classes of first-order entities; and as such, they are what we are taking to be the most typical nouns" (cf. Lyons (1977 : 446). In contrast to first-order nouns second-order and third-order ones are complex or compound, rather than simple which are exemplified by Lyons (1977 : 446) as *arrival* , *death* , *amazement* , *hous-keeping*.

Second-order entities are defined by Lyons (1977 : 443) as events, processes, states-of-affairs, etc. which are located in time and which, in English, are said to occur or take place, rather than to exist. Third-order entities are such abstract entities as propositions, which are outside space and time. Unlike, first- and secon-order entities, third-order entities are unobservable and cannot be said to occur or to be located either in space or in time.

However, although Lyons's scheme is of great importance, it needs some refinement, as correctly noted by Miller (1985 : 210) who extended the first-order entities to include an undefinable class of nontypical nouns such as *truth* or *fear*, for example. Miller observes that "it is not clear where abstract entities like 'fear' or 'truth' fit in" since they are neither first- nor secon-order entities. That is, they are not physical entities nor can they occur or take place but to exist (**fear occurs* but *fear exists*). Miller suggests that such entities are 'courtesy first-order entities. To quote,

"the best solution is perhaps to regard these as 'courtesy' first-order entities : i.e. not physical entities to satisfy philosopher or physicist, but handled linguistically conceptually as though they were."

Moreover, Miller (1985 : 210) also notes the following :

1. Not all simple nouns denote first-order entities, e.g. *hunt* , *run* , *derive* etc.

2. It is a moot point whether *death* is a complex noun in modern English.
3. Not all compound nouns denote second-order entities, e.g. *icecream*, *ashtry*, *screwdriver*.
4. Not all complex nouns denote second- and third-order entities, e.g. *teacher*, *farmer*, *worker*. And some 'courtesy' first-order entities are complex, e.g. *width*, *warmth*, which show that there is no straightforward correlation between morphological complexity and order of noun or entities.

Such refinements brought by Miller (1985) are very important in order to understand Lyons's scheme accurately. However, whether there is morphological correlation between the order of nouns or not does not affect the fact presented by Lyons that common concrete nouns are the most typical ones. Therefore, Lyons (1977 : 447) assumes that first-order nouns are necessary in every language since "no language will have second-order or third-order nouns that does not also have first-order nouns".

4.3.2 The Semantic Characteristics of Adjectives :

Lyons (1977 : 448) distinguishes semantically between the grammatical categories Nouns, Verbs, and Adjectives in terms of concrete, action and quality respectively. Lyons distinguishes between two basic syntactic functions of predication : those which constitute the predicative syntagm as opposed to those which constitute the syntagms about which something is predicated. Such a distinction reflects the semantic functions of predication vs reference. In this kind of analysis adjectives are connected with predication. Lyons (1977 : 448) states that

"... we might distinguish the most typical nouns, verbs, and adjectives in particular languages : concrete common nouns, action-denoting verbs and qualitative adjectives. In relation to these three subclasses of nouns, verbs and adjectives the semantic criteria traditionally invoked are applicable without evident circularity; and it suffices that we can define semantically what we are taking to be the most typical nouns verbs and adjectives." Lyons (1977 : 448).

Lyons (1977 : 447) observes that adjectives fall between nouns and verbs²⁷. His scheme can be presented as below :

Syntactic Category	Noun	Adjective	Verb
Function	reference		predication
Semantic Class	concrete	property	action

The above scheme shows that adjectives attribute properties, and therefore, differ semantically from nouns, which denote 'concrete' objects, and from verbs which denote 'action'. According to Lyons nouns are referential expressions whereas verbs are predication. This kind of association between entities and reference, on one hand, and action and predication, on the other, though not necessarily true, seems to be natural²⁸. However, the semantic category of property is associated with predication in some languages, with reference in others (cf. Lyons 1977 : 447).

But it must be noted that although "property" denoting words "fall between concrete and action", they are correlated with predication. This is correctly noted by Miller (1985 : 219) who remarks that Lyons (1966) "sees either verbs or adjectives as the main bearer of predication". Miller summarizes Lyons's argument in two main reasons. Firstly, there are languages like Chinese which lack a clear distinction between verbs and adjectives. Secondly, there are languages such as Modern Russian, Greek, and Arabic in which Adjectives carry predication without the presence of a verb or a copula.

However, Miller (1985 : 220-221) cites some Russian and Greek examples showing that adjectives carrying predication are not typical. Although Arabic adjectives can carry predication, such function is not as frequent as nonpredicative occurrences. The data show that there are 1373 (15.2 percent) occurrences of predicative adjectives as opposed to 7663 (84.8 percent) nonpredicative (see Table 4 in Chapter VI). This, if acceptable, gives support to the claim made by Miller whose scheme can be presented as follows :

Syntactic Category	Noun	Adjective	Verb
Function	Reference	Modification	Predication
Semantic Class	Concrete	Property	Action

Miller's scheme shows that the primary function of adjectives is modification as opposed to nouns which are primarily referential and verbs which are primarily predication. The 84.8 percent of Arabic adjectives occurring attributively and modifying a preceding head noun give support for Miller's scheme.

4.3.3 Predicative Expressions :

Predicative expressions denote situations. Situations, as used by Lyons (1977 : 483), cover states, on the one hand, and events, processes and actions, on the other. Lyons (1977 : 483) also remarks that "a static situation (or state-of-affairs, or state) is one that is conceived of as existing, rather than happening, and as being homogeneous, continuous and unchanging throughout its duration". In English and in Arabic static situations are typically denoted by adjectives : *huwa mariiDun* "he is sick". Adjectives also denote qualities or characteristics associated with entities : *alwaladu jamiilun* "the boy is handsome". Although qualities are not identical with states, their predicative expression evokes static situations. Qualities are generally permanent and inalienable which can be introduced in English by "be" or "have" as noted by Quirk et al (1985 : 200)²⁹. In this connection consider the following English examples :

QUALITY	STATE
38.a John is Mexican	38.b John is sick.
39.a Sue has brown eyes.	39.b Sue has a bad cold.
40.a *John is being Mexican.	40.b *John is being sick
41.a *Sue is having brown eyes	41.b ? Sue is having a bad cold.

Lyons (1977 : 485) and Quirk et al (1985 : 200) note that stative situations do not occur

with the progressive especially qualities, therefore, the examples in (40-41) are not acceptable. It is also noted by Quirk et al (1985 : 200) that if such sentences do occur in the progressive, "it is a sign that they have been in some sense reinterpreted as containing a dynamic predication. For example, *Peter is being awkward* signifies that 'awkwardness' is a form of behaviour or activity, not a permanent trait". Similar observations are applicable to Arabic. Consider the following Arabic examples :

QUALITY	STATE
42.a cali <u>sucuudiyyun</u> "Ali is Saudi".	42.b cali <u>mariiDun</u> "Ali is sick".
43.a cali <u>wasiimun</u> "Ali is handsome".	43.b cali <u>Tawiilun</u> "Ali is tall".
44.a *kun sucuudiyyan "Be (M. Sg) a Saudi".	44.b *Kunii mariiDatan "Be (F.Sg) sick".
45.a *kun wasiiman "Be handsome".	45.b *kun Tawiilan "Be tall".

The underlined items above are first-order states which correspond to what we call Simple adjectives, as in (42.b) and (43.a, b) and denominal adjective, as in (42.a). They generally do not occur in the imperative, therefore, (44-45) are unacceptable. The second-order states are represented by participial adjectives, which have a dynamic verb form. The dynamic situation is something that happens, occurs or takes place (cf. Lyons 1977 : 485). Dynamic situations are typically denoted by verbs. They can be momentary or enduring. They are not necessarily either homogeneous or continuous. In contrast to first-order states, second-order states are denoted by marked forms. Second-order states in English are denoted by marked participial forms found in passive construction and adjectival predicators. Arabic second-order states are denoted by the different participial patterns (see §5.). The following examples from English and Arabic are illustrative :

46.a	The elevator has been <u>fixed</u> .	46.b	David is <u>worried</u> .
47.a	The <u>standing</u> boy	47.b	The <u>amusing</u> story

The underlined second-order states in (46) take the *-ed* suffix, and those in (47) take the *-ing* suffix. Therefore, it is said that they are marked, i.e. formally marked. Notice that (47.a) is considered second-order state whereas (47.b) is first-order state. However, the distinction between the items in (a) and those in (b) is not always straightforward since the boundary between static and dynamic situations is not very well defined, therefore, we find different explanations in English to differentiate between the two types³⁰. The same applies to Arabic adjectives which we divided into Simple (first-order state), Derived which are of two types : Participial (second-order state) and Denominal. In this connection the following are illustrative examples :

48.a ?arrajulu waqifun
"The man is standing".

48.b ?arrajulu baaridun
"The man is cold".

49.a ?ar-rajulu maqtuulun
"the man is killed".

49.b ?innii maHzuunun Haqqan
"I'm very sad".

Although the underlined items in (48-49) share the same form (/FaaCiL/ in (48) and (/maFCuuL in (49)), they differ from each other with respect to other features of Arabic adjectives. While the (a) examples in (48-49) cannot be modified by intensifiers such as *jiddan* "very" nor can they inflect for the comparative and superlative, the (b) examples in (48-49) can (for more on this see §5.1.3 and §5.2). This does not contradict the finding by Lyons, but clearly shows that the boundary between the two types is not clearly defined.

The general conclusion from the discussion in this section is that while nouns can be divided into different orders of entities which are associated with referential expressions adjectives can be divided into different orders of states which are associated with predication expressions. This type of semantic scheme seems to correlate with other findings (syntactic and morphological) about adjectives in general and about Arabic adjectives in particular.

4.4 Concluding Remarks :

The similarities and differences between Arabic adjectives and nouns are discussed and found that the two differ from each other with respect to some important characteristics. These characteristics are summarized in Table (4) which also shows the reference number where the relevant discussion is found in this Chapter.

Criteria for adjectivehood

Diagnostic Criteria	Adjectives	Nouns	Reference
Morphological :			
1. Comparative and superlative	+	-	§4.1.1
2. Take Possessive Pronouns	-	+	§4.1.2
3. Complementary Definiteness System	-	+	§4.1.3
4. Take Object Pronouns	(+)	-	§4.1.2
Syntactic :			
1. Exclamatory <i>ma</i>	+	-	§4.1.4
2. The negative <i>gayr</i>	+	-	§4.1.5
3. The neg. particle <i>la</i> of "existence"	-	+	§4.1.6
4. Maximum generality Words	+	-	§4.1.7
5. The "Comprehensive permutation"	-	+	§4.1.8
6. Modified by Intensifiers	+	-	§4.1.9
7. Subcategorize for obligatory complements	+	-	§4.1.9
8. Restricted in subject and object positions	+	-	§4.2
Semantic :			
1. Predicational Expressions & First-order States	+	-	§4.3.2
2. Referential Expressions & First-order Entities	-	+	§4.3.3
3. "Human" and "Definite when Substantivized"	+	-	§4.2

Table (4)

The above Table shows that Arabic adjectives differ from nouns morphologically, syntactically and semantically. Any grammar that reduces the importance of the facts presented above must explain these various features or separate the class of nouns from that of adjectives. Therefore, the analysis of the traditional Arab grammarians, which ignores these differences and assign the Arabic adjectives to the class of nouns, and which is supported by some modern linguists, is found inadequate. Therefore, Arabic adjectives is a separate word class and differs from nouns.

- 1 See §3.1.2 where Ezzat (1975) observes that in the traditional grammar books the *xabar* "predicate" is either a noun, a sentence or a semi-sentence. What is considered as a noun is turned out to be an adjective, therefore, Ezzat suggests a redefinition of predicates to include adjectives.
- 2 Bishai (1971 : 106), for example, remarks that :

"adjectives may be considered as qualifying nouns and fill all the basic noun syntactic positions."

Also Carter (1981 : 249) observes that :

"All adjectives may function as nouns, but it is not clear how essential it is to assume an elided antecedent in every case".

What this amounts to is that when the adjective modifies a preceding head noun, it is analyzed as an adjective; and when the head noun is not there it is a noun, therefore it is incorrectly concluded by the TAG and by some Arabists that Arabic adjectives do not have a separate word class. The weakness of such statements will be clear particularly when we discuss the substantivized Arabic adjectives and notice that such occurrence is neither frequent nor typical, and therefore, it is not without restriction, i.e. the substantivized adjectives are shown to be "definite", modify "human" head N, and are "plural". For more on this see (§4.2).

- 3 Anderson, S.R. (1985 : 199). "Inflectional Morphology" In Shopen Vol III.
- 4 This is noted by Anshen and Scheiber (1968) :

"The only formal distinction between genitive (possessive) and accusative (object) is made in the first person singular forms : -*ii* in the genitive, *nii*- in the accusative."
- 5 It must be noted that the object clitic pronoun can be attached to the comparative adjectives as well, when preceded by *ma* "how". But the comparative adjectives like the participial and the other adjectives, cannot take the possessive pronoun -*ii* . In this connection the following examples are illustrative :
 - 1.a *ma ?ajmal-u-nii*
how nice-NOM-me
"How nice I'm."
 - 1.b **ma ?ajmal-ii*
 - 1.c *?as-silm-u ?ajmal-u min ?al-Harb-i*
the-peace-NOM nicer-NOM than the-war-GEN
"Peace is nicer than war."
 - 1.c **?as-silm-u ?ajmal-u-nii min ?al-Harb-i*

Thus the comparative adjective, like the participle, can take the object pronoun-*nii* "me" but only in a very restricted structure, that is when preceded by the exclamatory *ma* "how". Moreover, the-*nii* cliticised to the comparative *?ajmalu-nii* , for example, is not the "Patient" since the corresponding verb *jamula* "become beautiful" is not a transitive verb which action can extend to another argument.

- 6 Owens quotes Mubarrid (Vol IV : 143) and Symari (140, 287).

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- 7 The same distinction is also noted by Wickens (1980 : 48).
- 8 Although in the Arabic linguistics this observation is used to distinguish between the various definiteness of nouns, it is not observed that it can be employed to distinguish between adjectives and nouns. This observation is due to this author.
- 9 Obviously, there is another argument that one could take. It may be argued that since Arabic adjectives do not obey the 'Complimentary Definiteness' system the structure in which they occur cannot be considered a "Construct Phrase" structure, and as a result the argument suggested above is irrelevant. But if we follow this line of argument, it means that Arabic adjectives are distributionally different from nouns since only the latter can occur in the "Construct Phrase". Consequently, they are different and must be assigned to separate classes. But it is important to note that the similarity between nouns and adjectives with respect to the features in (a) and (c) force us to argue differently and shows that although both adjectives and nouns, can occur in the "Construct Phrase", only nouns must obey the "Complementary Definiteness" system; consequently they are different.
- 10 For a discussion of the "Construct Phrase", see Chapter II.
- 11 Notice that there is a negative particle *ma* and a referring expression *ma*. They are homonymic with the interrogative *ma*. Wright (1898 Vol II : 17) observes that *ma* also can mean *as long as* or *while* (daymuumiyat).
- 12 English has similar restriction since while we have *a big room* and *an office room*, we have *something big* but not **something office* (cf. Quirk 1985 : 1294).
- 13 There are many different types of permutation in Arabic, for more on this topic see Hasan (1976 Vol III) and Wright (1898 Vol II).
- 14 Notice that the evidence provided here is related to the morphological evidence in (§4.1.2), i.e. adjectives cannot take clitic pronouns. Notice that this is not mentioned in the literature in relation to Arabic adjectives.
- 15 See Wasow (1977) where he distinguishes between verbal and adjectival passives.
- 16 Notice that these examples cause no problems for the representation suggested by Brown and Miller (1980 : 54) who remark that English 'transitive locative' verbs such as *stand* can have the following representation :
 STAND V; __ (NP) PP
 as in *He stood the lamp on the table*. This representation indicates that the verb STAND must occur with a following PP, and may optionally occur with an immediately following NP. Therefore, STAND is either an intransitive locative or a transitive locative. Similarly verbs such as CONSIDER can be represented as follows :
 CONSIDER V; __ NP { AP, NP}
 The items in the curly-brackets are alternatives.
- 17 This, if true, shows that phrase-structure rules should be allowed to include features such as $[\pm \text{ gradable}]$ as noted by Maling (1983).
- 18 This issue will be treated separately when we discuss adjective complementation in Arabic. Therefore, the point discussed here is just to demonstrate that Arabic adjectives can have their obligatory complements with which they are strongly related (for more

see §7.3).

- 19 Our aim is not to discuss Arabic coordinately conjoined constructions but to show that it can provide further evidence as to the status of Arabic adjectives. For full treatment of coordination the reader is referred to a number of different works which advocate a Phrase Structure approach such as Dougherty (1970, 1971), Schachter and Mordechay (1983). A transformationally oriented approach can be found in Jackendoff (1972). For a historical background see Oirsouw, R.R. (1987).
- 20 Therefore, statements such as that of Comsky (1957 : 36) should be modified :

"... if X and Y are both constituents, but are constituents of different kinds [...] then we cannot in general form a new sentence by conjunction [...] In fact, the possibility of conjunction offers one of the best criteria for the initial determination of phrase structure."

We will not discuss this issue. However, the above statement seems to provide useful results, if semantic considerations are taken into account. It has been argued by different linguists such as Schachter (1977) and Dik (1980 : 192-209) that for coordination to be grammatical the coordinated elements must have the same semantic function.

- 21 Schachter, P. (1977). "Constraints on Coordination". *Language*. 53, 86-103. Schachter (1977) for example, argues that category identity is not a sufficient condition : there must be semantic or functional identity in addition to syntactic identity for the coordination to be acceptable. Therefore, (a) is not acceptable although the two coordinated categories are the same, namely PPs

a. *Zaydun fi ?ad-daari wa fi ?al-madrasati
Zayd in the-house and in the-school
"Zayd is in the house and in the school".

- 22 Related to the coordinating conjunction *wa* "and", is *bal* "but" which has similar restriction (cf. Carter 1981 : 288). In this connection the following examples are illustrative.

- a. ma jaa?a walad-un bal bintun-un
neg came boy-NOM but girl-NOM
"A boy did not come but a girl came."
b. *ma jaa?a walad-un bal Tayyib-un
neg. came boy-un but nice

The two underlined nouns in (a) are conjoined by *bal* "but", however, when the noun *waladun* "boy" is conjoined with the adjective *Tayyib-un* "nice" the example is unacceptable. This shows that *bal* "but", like *wa* "and", generally used as a coordinating conjunction between similar word classes.

- 23 Similarly Dik (1980 : 192-209) tries to exclude similar sentences and remarks that his account is superior since it contains no filtering devices which are unnecessary.
- 24 We will follow the traditional Arab grammarians in defining DEFINITENESS. For them a noun is definite if its reference is known to the discourse participants. There are seven types of definite nouns (cf. Hasan 1976 Vol I : 211) :
1. Proper Nouns

-
2. Pronouns
 3. Nouns marked by the definite article *ʔal-* "the"
 4. Demonstratives.
 5. Nouns modified by relative clauses.
 6. Nouns which are 'annexed' to a definite noun in the "construct phrase".
 7. Nouns which are used in the vocative.

For a full discussion on Arabic definiteness see Hasan (1976 Vol I 206-441), Al-faDli (1988 : 43), and Wright (1898 II : 198).

- 25 Notice that we do not go any further to assert that such substantivized adjectives apply to "well specified categories of people (Negro communists) " as Wierzbicka did. This is because many Arabic substantivized adjectives, although applying to people, do not apply to such specified categories of people.
- 26 These examples are due to Wierzbicka (1986 : 362-363).
- 27 Lyons (1977 : 447) writes that "it would seem, in fact, that qualitative adjectives fall, semantically, between the most typical nouns and the most typical verbs; and in particular languages, they may be assimilated, grammatically, to either nouns or verbs."
- 28 The term "natural" is used here as employed in case grammar, by Anderson, J. "On Case Grammar. London. (1977). This notion applies, for example, to the distinction between natural and grammatical gender as noted by Anderson (282, note 20) :

Only if semantic and grammatical gender are described in terms of the same alphabet (of semantic elements) can we give expression to the naturalness or otherwise of some grammatical. A masculine form is natural if it is semantically masculine; it is unnatural (grammatical) if it is masculine only by lexical convention and it is semantically of some other gender."

- 29 On this Quirk et al (1985 : 200) writes that :

"Qualities are relatively permanent and inalienable properties of the subject referent. The primary verbs be and have are preeminently quality-introducing verbs; but can also introduce the less introduce the less types called states".

- 30 In English the (a) and (b) examples are distinguished in terms of physical process vs emotive, respectively. We distinguish between these two types among others in a separate section when we discuss Arabic participles, particularly in (§5.1.3 and §5.2).

CHAPTER V
SIMPLE AND PARTICIPIAL ADJECTIVES

5. Introduction

In this Chapter we will consider the various proposals made by the traditional grammarians as to whether Arabic participles are verbal or nominal. It will be argued that the traditional account is inadequate, and that the participle belongs to the class of adjectives. However, it differs from Simple adjectives (cf. central adjectives) with respect to some criterial features. Therefore, it will be placed in the peripheral boundary of adjectives lying between adjectives and verbs. Because of this we will focus on Simple adjectives of the pattern /FaaCiL/ -Simple adjectives such as *baarid* "cold", which will be referred to as type (i), or Participial adjectives such as *ʔaahib* "going", which will be referred to as type (ii), and Participial adjectives such as *qaatil* "killing", which will be referred to as type (iii)-. Notice that both types of adjectives, Simple and Participial, take various patterns which are different from each other except this pattern. Therefore, consideration of the pattern /FaaCiL/ is more problematic and interesting. However, the generalization stated with respect to the Simple and Participial adjectives of the pattern /FaaCiL/ can be extended to other Simple and Participial patterns.

It is also interesting to note that this Participial pattern, /FaaCiL/, is the only one which does not take any affix since -other Participial patterns are introduced by various prefixes (see Table 1, below). This means that this pattern, from a morphological point of view, is simple since it does not take any prefix. This seems to be the reason behind having many Simple adjectives occurring in this pattern. Let us consider some of the facts about this Pattern and its corresponding passive Participle.

The participle in Arabic can be divided into active and passive which are traditionally called *ʔism ʔalfaacil* "nomen agentis" and *ʔism ʔalmafcuul* "nomen patientis" (cf. Wright 1898 Vol II : 67). The data in Table (1) below show that there are 769 different forms of the active participle which have 3006 different occurrences, i.e. contexts. There are 370 different members of the pattern /FaaCiL/ alone which occur in 2024 various occurrences, i.e. contexts, either attributively (total occurrences of members in the /FaaCiL/ pattern is 1712) or predicatively (total occurrences of members in the /FaaCiL/ pattern is 312). That is, the attributive occurrences of the /FaaCiL/ adjective constitute 85 percent and their

corresponding predicative only 15 percent of the total number of occurrences. Notice that this /FaaCiL/ pattern includes not only Participial adjectives but also Simple adjectives, i.e. central adjectives, as we will discuss later in this section.

Active And Passive Participle Patterns And their Occurrences

Form	Active Participle Patterns	No of Forms	No of Contexts	Passive Participle Patterns	No of Forms	No of Contexts
I	FaaCiL	370	2024	maFCuuL	176	576
II	mu-FaCCiL	26	63	mu-FaCCaL	125	298
III	mu-FaaCiL	32	78	mu-FaaCaL	21	51
IV	mu-FCiL	79	273	mu-FCaL	34	138
V	muta-FaCCiL	95	189	muta-FaCCaL	4	4
VI	muta-FaaCiL	53	125	muta-FaaCaL	1	5
VII	mun-FaCiL	40	192	-----		
VIII	mu-FtaCiL	59	143	mu-FtaCaL	13	20
IX	muFCaLL*			-----		
X	musta-FCiL	15	19	musta-FCaL	2	2
	Total	769	3106		376	1094

Table (1)

The Table also shows that the number of the passive participle forms occurring in the data is much less than that of the active participle. There are 376 different passive participial adjectives which occur in 1094 different contexts. The pattern /maFCuuL/, i.e. Form I of the passive participle, in Table (1) above, alone occurs in 576 examples either attributively (total occurrences is 445, i.e. 77 percent) or predicatively (total occurrences is 131, i.e. 23 percent). The statistical comparison between the Simple and Participial adjectives of the pattern /FaaCiL/ is presented below in Figure (1).

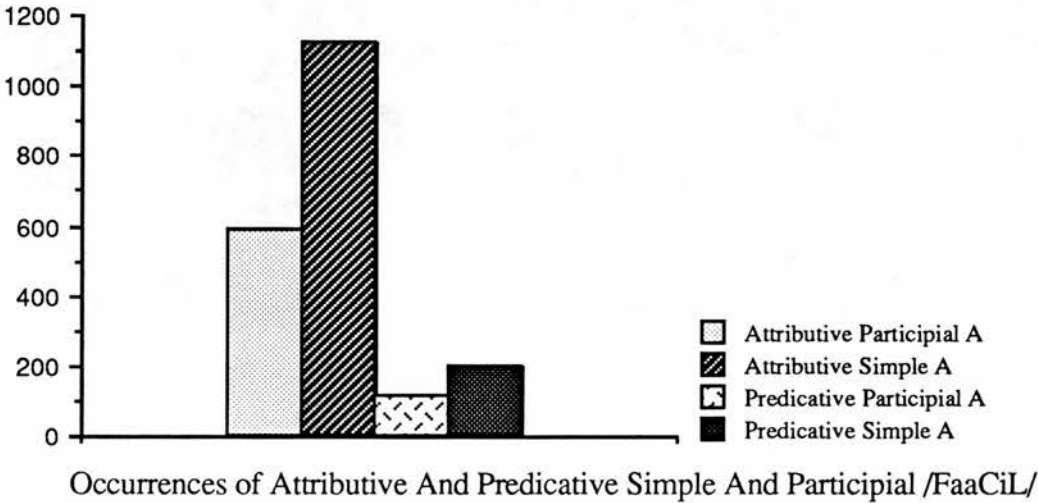


Figure (1)

Figure (1) compares the number of Simple and Participial adjectives of the /FaaCiL/ pattern. Simple adjectives in both occurrences, predicative and attributive, (1322) outnumber Participial (702). There are 1121 attributive Simple adjectives as opposed to 591 Participials. Figure (1) also shows that there are more predicative Simple adjectives (201) occurring in the /FaaCiL/ pattern than predicative Participials (111). This pattern is not only shared between Simple and Participial adjectives but also predominantly occupied by Simple adjectives, and the traditional grammarians' view that the Simple adjectives occurring in this pattern are "assimilated" to the participle is not adequate, since it is the other way around. That is, because of this similarity between Simple adjectives and participles the traditional grammarians gave the name *Sifah muḥabbah* "assimilated adjective" i.e. adjectives which are assimilated to the participles of /FaaCiL/, to adjectives including other Simple adjectives which do not occur in the /FaaCiL/ pattern (cf. Wright 1896 Vol I :133). Because of the statistical facts provided above we do not accept this term, and prefer instead the term *Sifah* "adjective". In what follows we will show how we differentiate between Simple and Participial adjectives of the pattern /FaaCiL/.

The active and the passive participles do not only occur in the /FaaCiL/ pattern (i.e. Form I) but have other Forms such as those in II-X in Table (1). The participles seem to occur in certain predictable patterns which have corresponding verb forms from which they are derived¹. The most common and frequent participial patterns are /FaaCiL/ and /maFCuuL/ for the active and passive participles respectively, with /FaaCiL/ forms being the most frequent. The corresponding passive participle pattern /maFCuuL/ is the most frequent of the passive participial patterns in Table (1). For a complete list of the Participial /FaaCiL/ and /maFCuuL/ occurring in our data see Appendix II.

Table (1) also shows that other participial patterns are less frequent ranging, from 298 different occurrences to 2. Table (1) shows that the active participle (except pattern II) is always more frequent than the corresponding passive participle.

It must be noted that Table (1) represents mainly the triliteral patterns since it is the most frequent patterns in Arabic. Thus according to our data the triliteral pattern is the most frequent. This is also observed by a number of scholars. Ziadeh & Winder (1966 : 20), for

example state that "the most characteristic feature of the Arabic language is that the great majority of its words are built up from roots each of which consists of three consonants or radicals".

On the other hand, Wright (1896 Vol I : 47) observes that the quadriliteral patterns are very rare. Our data, in which the quadriliteral patterns are extremely rare, is consistent with this observation.

Form IX in Table (1) is asterisked since it is restricted to "Colour" and "Defect" adjectives (cf. Bateson (1967 : 19); also Wright (1896 Vol : 43) who observes that Form IX is restricted to "Colour" and "Defects" and states that :

"They serve chiefly to express colours and defects, these being qualities that cling very firmly to persons and things."

Similarly McCarthy (1985 : 241) remarks that "the ninth and eleventh binyanim are reserved for verbs of color or bodily defect, and describe the corresponding state of being"². Examples such as *muHmarrun* "becoming red", *muSfarrun* "becoming yellow", which belong to Form IX, show that such forms represent a change of state. For more on the colour adjectives see §3.2.1 and §3.2.2.

Moreover, Form VII of the passive participle does not occur since its corresponding active participle represents passive meaning. For instance, Form VII /munFaCiL/ is an active form, therefore there is no passive corresponding form such as /munFaCaL/, with the final syllable vowel *a* rather than *i*. Thus this form actually has no active participle correspondence. This is observed by Travis (1979 : 16). Also Ziadeh & Winder (1966 : 114) observes that "The passive participle of a form VII hollow verb is identical in form with the active participle. The participles of the VII hollow verbs behave in the same way". This study is concerned with Arabic adjectives. Since we do not wish to discuss Arabic verbs, we will limit the scope of this study to Form I of the participle, though we will refer sporadically to other Participial Forms. This limitation is not random since Form I of the participle, either active or passive, is the most frequent in our data, and is also the most interesting.

5.1 The Status of The Participle

The discussion in this section will include the following : the participle as a noun, the participle as a verb, and the participle as an adjective. The discussion of the Arabic participles produced a number of theories advocating various proposals. This discussion is not new, going back to the two traditional grammar schools of Arabic linguistics, Basra and Kufa. While the former maintains that the imperfective verb is similar to the participle which is similar to nouns, the latter school maintains that the participle is one of the Arabic finite verb type called *daa'im*. We will discuss these proposals and why they are inadequate. Later we will suggest that the participle be considered as a type of Arabic adjectives lying on the boundary between the adjective and the verb. This suggestion is claimed to solve some of the problems found in the previous two proposals. It will also be argued that our proposal does not contradict any morphological feature of the relevant aspect, and is supported by some statistical frequencies.

Although there are Arabic participles, corresponding to transitive verbs, which can take NP complement, we will consider them as peripheral adjectives because they, and other participles as well, differ from verbs with respect to the following features :

1. They do not have any time reference since the same participle can occur with various time adverbs such as *ʔalʔaan* "now", *gadan* "tomorrow, and *ʔams* "yesterday".
2. They take no person markers.
3. They occur both attributively as well as predicatively.
4. They can take the definite/indefinite markers.
5. Their accusative NP complement can also occur in the Genitive case, while the transitive verb's accusative NP complement must occur in the accusative case.
6. They take the various case markers such as nominative accusative and genitive.
7. Their complement (if any) follows it. However, the verb's complement can precede, follow or be separated from its verb.

8. Their position with respect to their head N does not vary since they follow their modified head N wherever it occurs. However, the verb can occur initially, medially, or finally irrespective of its subject or object.

Because of these reasons we will consider participles including those which take a NP complement, as peripheral adjectives with which they share other features (see the discussion on the Prototype in Chapter II). However, it will be argued that when the participle takes a complement it is more verb-like, and, when it does not it is less verb-like.

5.1.1 The Nominal Participle

In this section we will treat the Arabic participle as discussed by the traditional Arab grammarians and their debate about the status of the Arabic participle specially the Basra (such as Ibn Yaciish (died 1245), Sibawayhi (died 793)), and Kufa (such as Al-kisaa'i (died 822))³. It will be noted that the main difference is that while the Kufan consider the participle as one of the Arabic finite verb types, the Basran argue for its nominal status and discuss the similarities between the participle and the imperfective verb. In spite of the reticence of Arabists on the subject, as noted by Mitchell (1978 : 230), the traditional Arab grammarians did concern themselves with the participle and in particular with the controversial participle *baasiTun* in the Qur'aan (Cave Suura 181, Verse 18) :

wa kalbuhum baasiT-un ʔiraacayhi bi ʔal-waSiid

"And their dog (is) stretching out its legs along the length (of the cave)"

To such perfect use of the participle in Arabic the grammarians of the rival schools of Kufa and Basra, and particularly Ibn Yaciish, an adherent of the dominant latter school, devoted considerable attention (cf. Ibn Yaciish, VII, 76-80). Argument among the traditional grammarians centered on whether or not the participle *baasiTun* "stretching" could be made to conform with the rules (of the Basra faction) by which the participle may not refer to past time. These grammarians claim that the participle may occur with a

sentential subject and object, like the two tenses (perfective and imperfective), provided that reference was to present or future time⁴.

Future use was in turn subject to the participle being preceded by one of the three constituents below (cf. Ibn Yaciish 78-79). It is claimed that the presence of these elements brings the participle closer to the verb and places it far from the noun (cf. Hasan 1974 Vol III : 247). These conditions are as follows :

- a. an overt "subject" (*mancuut* "modified")
- b. a negative particle or copula (e.g. *maa, laa, laysa*)
- c. an interrogative particle (e.g. *hal, ?a, man maa&a*)

The following are illustrative examples :

- 1.a *maa&a ?anta faacil-un*
 what you do-NOM
 "What are you doing." (J168)
- 1.b *?anaa Saacid-un sullam-a ?al-mi?&anat-i ?al-muZlim-at-i*
 I climbing-NOM ladder-ACC the-minaret-GEN the-dark-F.-GEN
 "I'm climbing the minaret dark ladder." (B20)
- 1.c *waSala ?al-?amr-u ?ila ?al-Hadd-i ?al-faaSil-i*
 reached the-matter-NOM to the-limit-GEN the-separating-GEN
 maa bayna ?iraadat-ihl wa taHqiiq-ihl
 what between wish-his and achievement-its
 "The matter reached the limit separating what (is) between his
 wish and its achievement." (H24)
- 1.d *dawiy-u ?al-?infijaaraat-i ?al-qaatil-at-i*
 sound-u the-explosions-GEN the-killing-F-GEN
 "The sound of the killing explosions" (H39)
- 1.e *?ila gaazaat-in wa qanaabil-in xaaniq-at-in*
 to gas-GEN and bombs-GEN strangling-F-GEN
 "To strangling gas and bombs." (C191)

The underlined participles in (1.a) and (1.b) are predicative as opposed to those in (1.c-1.e) which are attributive. The participles in (1.a), (1.d) and (1.e), *faacil-u* "doing", *?al-qaatil-at-i* "the killing" and *xaaniq-at-in* "strangling" respectively, take no complement whereas those in (1.b) and (1.c) take accusative object complements : *sullam-a* "ladder-ACC" and *maa bayna ?iraadat-ih wa taHqiiq-ih* "what is between his wish and its achievement". The object complement in (1.b) is a Noun Phrase and that in (1.c) is a Wh-clause. In example (1.a) the participle is preceded by an interrogative *maa&a* "what", thus satisfying the Basran condition (c), and in all of the examples in (1) there is a preceding head noun with which the participle must agree, thus satisfying condition (a). Notice that predication is signaled, like Simple adjective, by the fact that the participle must be indefinite and the head noun definite, i.e. it cannot agree with its head noun in definiteness, as in (1.a) and (1.b). But again, like the adjective, when both the participle and its head noun are definite, as in (1.c) and (1.d), or when both are indefinite as in (1.e) the participle is attributive and therefore, the participle and its head noun constitute a noun phrase rather than a full sentence. Moreover, according to Ibn Yaciish the time reference in (1.a) and (1.b), for instance, is "future" since in both there is an "overt subject" and the former is preceded by an interrogative and the latter is followed by accusative object complement. Time reference in examples such as (1.d) is considered to be unspecified⁵.

In contrast with the Basran restriction to the imperfective, the Kufan allowed the perfective aspect in the participles when taking an accusative object complement. This is a significant early counterpart to the differences of usage to which attention is drawn earlier in this research.

Even the Basran grammarian Ibn Yaciish admits reference to past time when such an adverb is present (e.g. *?ams* "yesterday"). However, in his view, in contrast with the Kufans', an object noun would in that case differ from those appropriate to occurrence with present or future adverbs such as *?al?aan* "now" and *gadan* "tomorrow". The following examples are illustrative :

2.a ?anaa Saa?im-un yawm-a ?al-xamiis-i

I fasting-NOM day-ACC Thursday-GEN

I'm fasting Thursday (when Thursday refers to the "future")."

2.b ?anaa Saa?im-u yawm-i ?al-xamiis-i

I fasting-NOM day-GEN Thursday-GEN

"lit. I'm fasting Thursday (when Thursday refers to the "past")."

The structures in the above two examples can be represented respectively as the following :

- | | | | |
|-----|----------------|---------------|-------------|
| i. | [imperfective] | ACC. argument | as in (2.a) |
| ii. | [perfective] | GEN. argument | as in (2.b) |

The above examples show that the *mustaqbal* "future" (imperfective) reading is available when the object complement is in the accusative as in (2.a)⁶. However, when the complement occurs in the Genitive the *maaDi* "past" (perfective) reading is available as in (2.b). Similar examples are included in SuyuuTi (died 1491)⁷. The structure in (2.a) as opposed to that in (2.b) can be represented respectively as follows :

- | | | |
|-----|--|---------------------|
| i. | nunated part.+ Accusative complement | -----> imperfective |
| ii. | non-nunated part.+ Genitive complement | -----> perfective |

The term "nunated" refers to the final *-n* as that attached to the underlined participle in (2.a) which is absent from the same participle in (2.b). However, this correlation between the final *-n* (nunation) and imperfective is ruled out by Al-farraa? (died 822) to whom the examples in (2) are due. This is because Al-farraa? read (2.a) with a genitive complement as well, i.e. *yawm-i* "day-GEN" instead of *yawm-a* "day-ACC"⁸. If this is acceptable, it means that "future" reference correlates with either accusative or genitive complement. Therefore, according to Al-farraa? (i) can also be as in (iii) :

- | | | |
|------|---|---------------|
| iii. | nunated participle+ Genitive complement | -----> future |
|------|---|---------------|

From the cases in (i-iii) it can be concluded that time reference can occur whether the complement is accusative or genitive⁹. However, there is one main difference between nunated and non-nunated participles, the former having "future" time reference (so they claim), the latter having "past" time reference. Therefore, it is claimed that what seems to be important is whether the participle is nunated or non-nunated. Consequently, Maxzumi (1986 : 116), who supports the Kufan point of view, noticing this fact, concludes that "nutation" indicates tense, namely the "future". He bases his conclusion on the fact that only nunated participles take accusative object complement, as in (i), i.e. (1.a). It must be noted that Maxzumi's purpose is to justify for the postulation of the participle as one type of the Arabic finite verb since he, following the Kufa school, considers the participle as a verb.

But Samurraa'i (1983 : 40) rejects Maxzumi's argument stating that "nutation" "can never indicate tense simply because it is attached to categories other than verbs, and the only candidate for morphological tense is the verb". Therefore, "nutation" taken as a morphological aspect cannot indicate tense. Moreover, Samurraa'i agrees with Maxzumi that when the participle is not accompanied by its complement it does not have any specific time reference. Therefore the presence of a complement signifies a verb-like feature¹⁰.

It must be noted that, although "nutation" is a characteristic feature for nouns, as in *walad-un* "boy", nouns cannot take "nutation" in the construct phrases, and therefore, it is also a characteristic feature for nouns not to take "nutation". That is, on the basis of the construct phrases, in which only participles, occurring as first members, can be nunated, Maxzumi wrongly concludes that nutation indicates tense¹¹. This yields the following structures :

- | | |
|---------------------------------------|---------------------|
| a. Participle + Accusative complement | [future] |
| b. Participle + Genitive complement | [past or future] |
| c. Participle + No complement | [no specific tense] |

Consider (1.b), repeated here for convenience :

The Basran grammarians claim that the final *-a*, attached to the imperfective verb, in (4.a) is similar to the accusative case marker suffixed to the participle; i.e., that there is a morphological resemblance between the participle, which resembles the noun since it takes the same case marker, and the imperfective. However, a close look at the perfective verb in (4.b) shows that the perfective verb can take the same marker, and nobody claims that the participle resembles the perfective. This clearly throws doubt on the resemblance between nouns and participles, on the one hand, and the imperfective, on the other. It also shows that the Basrans' claim, which is summarized clearly in Owens (1988 : 67), is inadequate :

"The reason the verb, which is basically uninflected, can take inflection in the imperfect verb is that it resembles the active participle. The active participle is a nominal form (according to the Basran) and hence inflected, and the imperfective verb acquires the right to inflection through its resemblance to this form."

The morphological similarities between the imperfective verb and the participle is ruled out by other morphological differences, i.e. morphologically the imperfective verb and the participles are different. The differences are summarized as follows :

- a. The imperfective verb does not take nunation.
- b. The imperfective verb does not take the genitive case.
- c. The imperfective verb does not take the definite article.
- d. Only verbs such as the imperfective take person markers.
- e. Only verbs such as the imperfective indicate tense morphologically.
- f. Only verbs such as the imperfective take negative particles.

But it seems that there is a morpho-syntactic relation between the verb, whether imperfective or perfective, and the participle. Both can occur predicatively and share the same subcategorization frames, as illustrated in examples (1.b) and (1.c) which show that the participle, like the verb, can take an accusative object noun phrase and a Wh-clause¹². However, from a syntactic point of view again, the main difference between the verb and the participle is the fact that the participle can occur attributively, as in (1.c-1.e) whereas the

verb cannot, i.e. the participle can occur in an endocentric construction as a modifier attributing a "property" to its preceding head noun, a characteristic feature of adjectives as noted by Lyons (1977 : 440). Moreover, the accusative complement for the verb must occur in the accusative but that of the participle can also occur in the genitive.

Another important difference is that while the participle follows its modified head wherever it occurs, i.e. whether in subject position object position, or complement to a preposition, the verb can occur in various positions following or preceding its subject and/or following or preceding its object. In other words the verb functions as the head of the construction whereas the participle functions as a dependent modifier modifying its preceding head N. Examples showing this will be provided when we discuss the proposal that the participle is an adjective (see §5.1.3).

Empirical facts make it impossible to accept the Basran claim that the imperfective verb resembles the participle morphologically. The Kufans, on the other hand did not even try to find similarities between the participle and the imperfective verb, since they admit the participle as one of the Arabic finite verb types without giving reasons, which is characteristic of their method. In the next section we will consider their view.

5.1.2 The Verbal Participle

Regarding examples such as (3) above, the other opposing grammarians of the Kufa school, denying the change in the case-endings, accept (3.b) with the underlined complement in the accusative, *sullam-a* "ladder-ACC". Al-kisaa'i (died 822) accepts the nunated participle + Accusative in the perfective (see Samurraa'i 1983 : 36, Mitchell 1978 : 231, and Maxzumi 1986 : 114-118) and analyzes the participle as taking an accusative complement, whether in the perfective (past) or imperfective (future). This is a natural conclusion for the Kufan (since Arabic verbs whether perfective or imperfective can take an accusative argument) who accept the participle as a finite verb without giving reasons as opposed to the Basran who argue for the nominal status of the participle, and, therefore, try to find similarities between nouns and participles since they claim that both are prefixed by

the definite article *ʔal-* "the" and take "nunation", the final *-n* (cf. Samurraaʔi 1983 : 39). This similarity between the participle and the noun is also claimed by the grammarian Siirafi, as noted by Owens (1988 : 137).

Chapter III discusses the fact that the nominal participles such as *kaatib* "writer", or *qaatil* "killer" take the Broken plural (*kuttaab* "writers", and *qatalah* "killers") as opposed to the adjectival ones, which take the Sound plural (*kaatib-uun* "writing-Pl.M.", and *qaatil-uun* "killing-Pl.M."). This is characteristic of adjectives, i.e., the Broken plural is associated with a nominal reading since the broken plural forms cannot be interpreted as adjectival ("writing" or "killing"). Verbs, on the other hand, neither take the Broken nor the Sound plural, since they agree with their plural subjects in a completely different system. Chapter III also discusses the fact that Sound plural is not restricted to Participial adjectives but seems to be common to all types of adjectives, i.e. including Simple and denominal. For more on this see Chapter III, particularly §3.3

Therefore, the active participle is neither nominal nor verbal, however, it is considered as a noun by the Basran as opposed to the Kufan who include it with verbs. This is also noted by Saamurraaʔi (1983 : 38), who observes that the traditional Arab grammarians were puzzled by the participle and its uses. For the Basran it is nominal and for the Kufan it is verbal. Moreover, the verb classification, as noted by Maxzumi (1986 : 114), according to the Basran is as follows :

1. *maaDi* "past"
2. *muDaaric* "non-past"
3. *ʔamr* "imperative"

Clearly in the above classification the *daaʔim* , i.e. the active participle, postulated by the Kufan as a verb, is not classified by the Basran as such.

Moreover, the Basran argue, as noted above, that the object complement occurs in the accusative case when "future" reference is indicated in the sentence. This is because they believe that the imperfective verb, is similar to the participle as opposed to the perfective which is different. It is claimed that this similarity between the participle and the imperfective enables the participle to take an accusative case only in the imperfective

reading¹³. The Basran wrongly argue that the imperfective verb pattern /yaFCaL/, for instance, and the participle /FaaCiL/ are similar, but they are not -cf. Hasan (1974 Vol III : 47) and Maxzumi (1986 : 115).

On the other hand, Maxzumi (1986 : 115) observes that the Kufan divides the verb into three : *maDi* , *muDaaric* , and *daa?im*¹⁴. Owens (1988 : 136) gives examples of the three verbs :

past	(maaDii)	<i>Daraba</i>	"he hit"	
present	(daa?im)	<i>Daaribun</i>	"hitting"	(AP)
future	(mustaqbal)	<i>yaDribu</i>	"he will hit/hits"	

Owens treats the participle as "present", which is considered as *daa?im* by Maxzumi, but also considers the "future" as "present" since it is interpreted as both "he will hit" and "he hits". He (1988 : 137) states that the verbal characteristics of the participle "include the ability to govern an accusative complement, its meaning, which indicates an interrupted action occurring at the present time, and its commutational properties, where it occurs in the same context as verbs"¹⁵.

Although it is correctly noted by Owens that the participle shows a verbal characteristic when it takes an accusative complement, his claim that the participle indicates tense is controversial. Contrary to the views expressed in Owens's, the Arabic participle shows no time reference, as noted by Tritton (1956 : 78), Wright (1898 Vol II :195) and Khayat (1965 : 62). Similarly, Hasan (1974 Vol III : 307), Samurraa?i (1983 : 40 et passim) and Maxzumi (1986 : 139) state that the Arabic participle does not have any time reference which can be signalled, unless there is an adverb. The examples in (3) show that even with an accusative complement a participle can cooccur with time adverbs such as *?al?aan* "now", *gadan* "tomorrow", or *?ams* "yesterday". The Arabic participle, then, does not have time reference but its verbal status is clearer when it takes a complement. Furthermore, the participle takes an accusative complement whether there is an accompanying adverb for past (*?ams* "yesterday"), future (*gadan* "tomorrow") or present (*?al?aan* "now"). Owens (1988 : 147) concluded his section about the participle by observing that :

"In any case, the important point here is not who won the argument, but rather the demonstration that the Arabic grammarians recognized the existence of difficult, **borderline** (emphasis mine) cases, and applied general linguistic principles in resolving them."

Being a borderline case, participles are problematic for both proposals. Our claim here is that participles are not central members of the adjective class but rather peripheral ones which are on the border between verbs and adjectives. This claim does not entail making a central member of a class peripheral, nor a peripheral one central. We only suggest shifting a peripheral member from one class to another, to the class of adjectives. This is the point of the discussion in the next section.

5.1.3 The Adjectival Participle

Nouns and participles, on one hand, and verbs and participles, on the other, are morphologically similar, but it does not follow that the participle belongs to either class. Morphologically it belongs to neither class. The time-reference of the participle is not helpful, because the participle cannot indicate tense -contrary to the claim that nunated participles indicate "future" time. The syntactic features are generally taken as indicating that the participle is a "verb", since it occurs predicatively and shares the subcategorization frames with the verb. But the syntactic facts that participles can occur attributively, modifying a preceding head noun and function as dependent elements, provide strong support to the claim that participles are not verbs.

Morphological and syntactic facts offer conflicting indications as to the status of participles. But why is this ? Is this restricted to Arabic participle or is it natural for participles in other languages, e.g. English ? As an answer to the first question, the two proposals probably faced such problems because of the way in which the analysis was conducted. Neither the Basra nor the Kufa grammarians consider the possibility that the

participle is an adjective¹⁶. This possibility is not blocked by the morphological facts since there is no morphological contradiction between the participle and the adjective. In addition, adjectives and participles can both function attributively and predicatively, as noted by Cantarino (1975 Vol II : 407).

Our data provide clear evidence supporting this observation, since most Simple and Participial adjectives occur attributively, modifying a preceding head noun with which they agree in case, gender, number and definiteness. There are 6442 occurrences (71 %) of attributive Simple and Participial adjectives as compared with 1356 predicative occurrences (15 %)¹⁷. Moreover, both Simple and Participial adjectives take PP complements, but only Participial adjectives derived from corresponding transitive verbs can take NP and *ma* "what" complements¹⁸. The total number of complements of Simple and Participial adjectives is 898 but there are only 23 occurrences of NP and *ma* "what" complements, or 2.5 % of the total. The occurrences of complements of Simple and Participial adjectives are tabulated in Table (2) below :

Type of Arabic Adjective Complements						
Adjectives	Types of Complements				Total	Percentage
	PP	<i>?an</i>	<i>ma</i>	NP		
Simple	136	5	-	-	141	16
Participial	730	4	3	20	757	84
Denominal	-	-	-	-	-	-
Total	866	9	3	20	898	
Percentage	96.5 %	1%	0.3%	2.2%	100%	100%

Table (2)

The above Table also shows that the most frequent complement-taking adjectives are Participials (84%), following Simple adjectives (16%), and then denominal adjectives, which take no complement.

Both Simple and Participial adjectives take a PP and *?an* "to-infinitive" complements, but only Participial adjectives take *ma* "what" and accusative NP. In other words, the types of complements show that the Participial adjectives are the most verb-like, since they, like

verbs, can take *ma* "what" and a NP complement. However, these two types of complements are not typical since they constitute only 2.5% of all complements.

Moreover, most of the adjectives in the data, whether Simple, Participial or denominal, occur without a complement as shown in Table (3).

Adjectives With/Without Complements

Adjectives	Occurrences with Complement		Occurrences without Complement	
	No of Occurrences	Percentage	No of Occurrences	Percentage
Simple	141	1.6 %	4779	52.9%
Participial	757	8.3 %	2121	23.5%
Denominal	-	-	1238	13.6%
Total	898	9.9%	8138	90.1%

Table (3)

The total number of adjectives with a following complement is 898 (9.9%) as opposed to 8138 (90.1%) without a complement. In data-based studies the textual-frequency is very crucial since it "demonstrates the important role of quantitative text analysis in providing evidence for linguistic patterns" (cf. Croft 1990 : 84). The generalizations relating to statistical facts presented in Tables (2-3) are as follows :

1. The occurrence of an adjective without a complement is typical, even for Participial adjectives.
3. Adjectives can take PP complements. Therefore, this type of complement cannot distinguish between the various adjectives.
4. Only Simple and Participial adjectives take ?*an* "to-infinitive" complement.
5. Only Participial adjectives take *ma* "what" and accusative NP complements.
6. The most frequent complement is the PP, i.e. they are the most typical
7. The least frequent complement are the (a) *ma* "what", (b) ?*an* "to-infinitive, and (c) accusative NP, respectively, i.e. they are the least typical.
8. Because of (a) and (c), in (7), the most verb-like is the Participial adjective. But notice that these two types of complements constitute only 2.5% of the total number of complements. In other words, they are not frequent.

With respect to (7) and (8) above, consider, for example, the Participial adjectives *qaabiD* "arresting", and *qaatil* "killing", which can take a NP complement. They occur in the data in 25 examples, but always without a complement. Moreover, both occur with an emotive reading (e.g. *?al-jawwu qaabiDun* "the weather is arresting", and *tafannujin qaatilin* "a killing fit"), which allows modification by *jiddan* "very". These are just few examples since the data is full of other similar ones, which show clearly that even those Participial adjectives which are more verb-like occur predominantly without a complement, or with emotive reading such as the above.

Swedish participles, like Arabic participles, take NP complements. To account for their peculiar behaviour Platzack (1980) observes that the lexical entry of Swedish past participle is marked +ADJ. The crucial difference between the adjective and the participle is claimed to be semantic. While the past participle focuses on the act referred to by the verb, the adjective just denotes a state of affairs. Although participles in Swedish take NP complements, Platzack (1980 : 46) considers them as adjectives since they, like adjectives, inflect for gender, number, definiteness, and occur attributively. Therefore Platzack concluded that "there are Swedish adjectives that can take direct NP complements; i.e., there is no fundamental difference between past participles and adjectives in this respect" (cf. Platzack 1980 : 51)¹⁹.

Because of this, the fact that Participial adjectives can, like verbs, subcategorize for an accusative NP, is downgraded in comparison with other facts in our data :

1. Are the accusative NPs typically complements of Participial adjectives? NO.
2. Do Participial adjectives always subcategorize for an accusative NP? NO.
3. Can the accusative NP in the subcategorizational frame of the Participial adjective also occur in the Genitive? YES.
4. Can the same Participial adjective that takes an accusative NP complement also function as a true adjective and accept modification by *jiddan* "very"? YES.
5. Is it true that only Participial adjectives derived from corresponding transitive verbs, unlike other adjectives, subcategorize for an accusative NP complement? YES.

6. Can the same Participial adjective that takes an accusative NP complement also occur attributively in an endocentric construction modifying its preceding head noun, and attributing a "property" to it. YES.

The positive answers provide support for the hypothesis that Arabic participles are adjectives. With regard to subcategorization frames, the fact that participles derived from transitive verbs take accusative object complements among other types is set against the other facts. Our proposal is not unproblematic but it poses fewer difficulties than the two analyses. Assuming that the data-base is not biased in some way, it is also clear that the Kufan grammarians based their analysis of Participial adjectives as verbs on untypical examples and on a restricted set of properties. We will treat Arabic participles as adjectives albeit not central, and note that their derivational source in verbs enables them, in principle, to take complements. Now consider the following examples :

- 5.a ʔayyatuha ʔal-muraahiqat-u [ʔal-waaḥib-at-u ʔal-Hayaat-a]
O the-juvenile-NOM the-giving-F-NOM the-life-ACC
"O you the juvenile the giving life ... "
(H68)
- 5.b waqafa bayna ʔal-muʔayyiciin [ʔal-muntaZir-iin
stood among the-funeral people the-waiting-Pl.M.ACC
xuruuj-a] ʔat-taabuut-i
departure-ACC the-coffin-GEN
"He stood among the funeral people (who were) waiting for the departure
of the coffin"
(C21)
- 5.c waqafa bayna ʔal-muʔayyiciin [ʔal-muntaZir-iin
stood among the-funeral people the-waiting-Pl.M.ACC
xuruuj-i] ʔat-taabuut-i
departure-GEN the-coffin-GEN
"He stood among the funeral people (who were) waiting for the departure
of the coffin"
(C21)

(C21)

(5) show that the double-underlined NP complements, when occurring with Participial adjectives, can take either the accusative case (as in 5.a-5.b) or the genitive case (as in 5.c). However, when occurring with verbs the NP complement must take the accusative case. In (5.a-5.b) the underlined participial adjectives take a following accusative noun as their complement -in both examples the double-underlined NP complements *?al-Hayaat-a* "the life-ACC" and *xuruuj-a* "the departure-ACC" have the accusative suffix. Thus, the participle, like the verb can take an accusative NP complement. However, the same complement corresponding to that in (5.b) occurs in (5.c) in the genitive case and the example is acceptable. This shows that the NP complement for the participle can either occur in the accusative or genitive. On the other hand, consideration of the corresponding verbs shows that their accusative NP complements must take the accusative suffix, as exemplified in (6), below.

6.a ?intaZara ?an-naasu xuruuj-a ?at-taabuut-i
waited the-people departure-ACC the-coffin-GEN
"The people waited for the coffin departure".

6.b *?intaZara ?an-naasu xuruuj-i ?at-taabuut-i
waited the-people departure-GEN the-coffin-GEN
"The people waited for the coffin departure".

In (6.a) the the NP *xuruuj-a* "departure-ACC" is governed by the verb *?intaZara* "waited", which assigns the accusative case to it. (6.b) shows that when the verb NP object complement does not occur in the accusative case, the result is ungrammatical. Therefore, (6.b) is asterisked. This shows that Participial adjectives, unlike verbs, their accusative NP complement is not required to take the accusative case. Now consider the examples in (7).

7.a ?an-naasi ?aδ-δaahib-iin ?ilay-hi
the-people-GEN the-going-GEN Pl.M. to-him
"The people going to him ...".

(A53)

7.b *?aḡ-ḡaahib-iin ?ilay-hi ?an-naasi

7.c *?an-naasi ?ilay-hi ?aḡ-ḡaahib-iin

The example in (7.a) shows that the underlined Participial adjective follows its modified head noun. Thus the head N *?an-naas-i* "the people-GEN" is followed by its dependent Participial adjective *?aḡ-ḡaahib-iin* "the going-GEN". When the Participial adjective precedes its head, as in (7.b), or when it precedes its head and its own complement, as in (7.c) the result is ungrammatical. Therefore, (7.b) and (7.c) are asterisked. However, consideration of verbs with respect to their position in the sentence shows that they differ, as in (8).

8.a ?an-naas-u ḡahab-uu ?ilay-hi
the-people-NOM go-3rd Pl. to-him
"The people went to him".

8.b ḡahaba ?an-naas-u ?ilay-hi
went the people to him

8.c ?an-naas-u ?ilay-hi ḡahab-uu
the people to him went

8.d *?an-naas-u ?ilay-hi ḡahaba
the people to him went

8.e ?al-walad-u ?ilay-hi ḡahaba

The examples in (8.a-8.c) show that the verb *ḡahaba* "went" can follow its subject and precede its complement as in (8.a), precede both and occur in sentence initial position as in (8.b), or follow both and occur in sentence final position as in (8.c). Thus the verb can occur in various positions irrespective of its subject or object. Therefore, verbs, unlike Participial adjectives can occur in various positions in the sentence without being required to move to any specific position. Another difference between Participial adjectives and verbs is shown in (8.d). Notice the person markers on the verb, which takes the third

person pl *-uu* when it follows its subject, as in (8.a) and (8.c). On the other hand, when it precedes its subject it takes the 3rd person Sg. rather than Pl. as in (8.b). Notice that the subject in (8.b) is plural and that in (8.e) is singular, and in both cases the verb takes the same marker. This shows that not only that verbs can occur in various positions but also that when they do so they take various markers. On the other hand, the Participial adjectives must agree with its head N with the same markers.

The above discussion shows that the requirement of the verb to have an accusative object would be changed with respect to its corresponding participle. That is, while the object of a transitive verb must occur in the accusative that of the participle may occur either in the accusative or in the genitive. Moreover, it is also important to note that another step further from the verb is when the participle is not followed by any complement which means that the whole subcategorization frame is optional, and therefore, the participle would be ambiguous between a result or a process reading. This case is the most dominant as we noted above (cf. Table 3) since it constitutes 74% of the total occurrences of the Participial adjectives. Arabic participles show gradual movement away from the verb (once by having a genitive complement, and once by having no complement). This is why Givon (1990 : 503) observes that "the less finite a clause is, the more likely are its subject and object arguments to lose their normal case-marking, and to be coded instead by genitive morphology". Thus, while the genitive case marking of the participle NP complement in (5.c) above, is one step away from verbhood, the omission of its NP complement is another step further away from the verb-like characteristics.

A similar observation is made by Randall (1984 : 325-330) who notes that the English *-ing* "nominals" have a process reading when they are followed by their complements as in (10), but only a result reading, as in (9), when there is no complement.

- 9.a The finding appeared in the journal.
- 9.b The typing is stacked on the desk.
- 9.c The cooking is starchy.
- 10.a the finding of the fossils

10.b the typing of the manuscript

10.c the cooking of Indian food

Randall (1984 : 326) observes that the *-ing* forms in (9) have a "result" reading whereas those in (10) have a "process" reading. This, as she argues, seems to relate to the presence of the underlined complements in (10) as opposed to their absence in (9). She also remarks that the process reading in (10) demonstrates a case of full inheritance. That is, while the *-ing* forms in (10) inherits the case roles of the corresponding verbs, those in (9) do not, and what allows such inheritance is the presence of a complement.

If true, this leads back to the view that Arabic Participial adjectives without a complement are less verb-like, but with a complement more verb-like. Thus the presence of complement is an important feature, indicating that the relevant Participial adjective is more verb-like than those in which the complement is absent as shown in (11) below²⁰.

11.a fi ?acmaa^{hi}-hi mawjatun raaqiSatun

in heart-his bloom dancing

"In his heart there is a dancing bloom (of youth)".

(J102)

11.b ?al-waladu ?ar-raaqiSu cala ?al-masraHi

the-boy the-dancing on the-stage

The boy dancing on the stage ... "

11.c bi naZratin θaaqibatin

in look penetrating

"In a penetrating look".

(B56)

11.d ?al-mismaaru ?aθ-θaaqibu ?al-xaJabi

the-nail the-penetrating the wood

"The nail penetrating the wood ... "

11.e *?al-mismaaru ?aθ-θaaqibu ?al-xaJabi *jiddan*

the-nail the-penetrating the-wood very

"The very penetrating the wood nail ... "

The underlined Participial adjectives in (11) all modify a preceding head N and occur in attributive endocentric construction. They add a "property" to their modified head N. For example, the Participial adjective in (11.c) *ʔaaqibatīn* "penetrating" modifies its preceding head noun *naZratīn* "look" which is described as being penetrating. In (11.a) the underlined Participial adjective is derived from a corresponding intransitive verb, and that in (11.c) is derived from a transitive verb. They are not followed by any complement, therefore, a result reading is associated with them. However, in (11.b) and (11.d) the same Participial adjectives take various complements and are associated with a process reading. In the next section we will note that the result/process readings correlate with the emotive/process readings as discussed by Brekke (1988). A correlation will be proposed between the emotive reading and modification by intensifiers such as *jiddan* "very". This means that we can also correlate between Randall's "result" reading and accepting modification by *jiddan* "very". In other words, when the Participial adjective is followed by an accusative complement, it is more verb-like and therefore, it cannot accept modification by intensifiers such as *jiddan* "very". Therefore, (11).e) is asterisked.

5.2 Criteria For Simple And Participial Adjectives :

This section deals with Arabic Participles and adjectives, especially those which occur in the patterns /FaaCiL/ and /maFCuuL/, which are traditionally called *ʔism ʔalfaacil* : "the agent noun" or the "nomina agentis", and *ʔism ʔalmafcuul* "nomina patientis" (cf. Wright 1896 Vol I : 131)²¹. The participles in Arabic have certain limited patterns which correspond to their relevant verbs. All these patterns, except pattern I : /FaaCiL/, are morphologically distinguished by an affix (mainly a prefix as illustrated in Table (1) in the beginning of this Chapter. Thus the active participial patterns are easily identified from a morphological point of view. Similarly the passive participial patterns can be identified without any difficulty. All the participial patterns, except pattern I of the active participle, can be regarded as "complex", since they are introduced by certain prefixes (see Table 1 in the beginning of this Chapter). Pattern I, /FaaCiL/, does not take any affix, and is not

restricted to the active participle. Simple adjectives, on the other hand, occur in different patterns mostly not marked by prefixes. but the majority occur in the pattern /FaaCiL/. Thus Simple and active participial adjectives are morphologically similar only with respect to this pattern, i.e. /FaaCiL/. The participial patterns correlate to certain semantic and syntactic features corresponding mostly to their relevant verbs. For example the active participle *jaalis* "sitting" has the following correspondences in patterns II and III respectively (see Table (1) in the beginning of this Chapter) :

I	jaalis	"sitting"
II	mujallis	"cause to sit (to seat)"
III	mujaalis	"sitting with somebody"

The above examples clearly show the relation between the different active participles. These different patterns lie outside the scope of this research, and the discussion will be limited to the active participle pattern /FaaCiL/ and its corresponding passive participle namely, the pattern /maFCuuL/. This limitation is not random but accords with the most frequent patterns occurring in the whole data, i.e. Form I (see Table 1 in the beginning of this Chapter).

The different functions of this pattern are observed by the traditional Arab grammarians as noted by Wright (1896 Vol I : 131-132) :

"these nomina agentis are not only real participles, indicating a temporary, transitory or accidental action or state of being, but also serve as adjectives or substantives, expressing a continuous action, a habitual state of being, or a permanent quality."

Thus this pattern has several classes; and it is the task of this section to discuss these classes. The pattern /FaaCiL/ will be divided into three major Types. The first type, (205 different adjectives) are identified as type (i), i.e. central adjectives, which although share the same morphological pattern of the active participle, i.e. pattern /FaaCiL/, are different. Types (ii), 89 different Participial adjectives, and (iii), 76 Participial adjectives, are identified as active participles derived from intransitive and transitive verbs respectively.

This classification employs syntactic, morphological and semantic features to demonstrate that type (i) differs from types (ii) and (iii), and that the latter two types in turn differ from each other. In this connection, the adjectives *baarid* "cold", *ʔaahib* "going" and *qaatil* "killing", for example, have the same pattern namely /FaaCiL/. However, the first adjective, *baarid* "cold", is different from the second and third. It is a central adjective and has all the characteristic features of central adjectives, e.g. occurs attributively and predicatively, can be modified by *jiddan* "very", and has a corresponding comparative, *ʔabrad* "colder", and superlative, *ʔal-ʔabrad* "the coldest". Moreover, it cannot take an accusative argument, the accusative suffix *-nii* "me" nor can it have a corresponding passive in form I, **mabruud*. Moreover its corresponding verb expresses a state rather than an action, the accompanying noun is non-agent, and does not have a corresponding Form I imperative. The second and third adjectives namely, *ʔaahib* "going" and *qaatil* "killing", respectively, are peripheral adjectives. Although they can occur attributively and predicatively, they are not central members of the class adjective since they cannot be modified by *jiddan* "very", nor can they have comparative and superlative corresponding forms. Other criterial features are used to distinguish them further from type (i). The second form, *ʔaahib* "going", is further distinguished from the third since it cannot have an accusative argument nor can it take the object suffix *-nii* "me". The verbs corresponding to types (ii) and (iii) can be semantically specified as expressing "action" rather than states and the accompanying nouns are the agent.

English participles are discussed by a number of scholars, particularly Brekke (1988), and correlated to adjectives. While there is a correlation in English between emotive verbs and adjectives via the derivation of the *-ly* adverbs from the *-ing* participles (revolting ~ revoltingly, surprising ~ surprisingly), in Arabic there is no unique morphological correlation between emotive verbs and adjectives. Moreover, the derivation of the comparative adjectives in Arabic seems to be crucial in distinguishing between what is a Participial /FaaCiL/ and what is a Simple adjective /FaaCiL/. That is, although we discuss the emotive Arabic participial adjectives and note that they, like Simple adjectives, can accept modification by intensifiers such as *jiddan* "very", we will not pursue Brekke's

argument because of the clear division, between Participial and Simple adjectives, provided by some criteria irrespective of whether or not a form is emotive. However, we will use the feature "emotive" since it seems to be useful, particularly for the discussion in Chapter VII of the exceptional examples with respect to adjective order. We will see that the typical order for sequences of single unmodified adjectives is Head N + Denominal A + Simple A + Participial A, but there are 65 examples with the order Head N + Participial A + Simple A, i.e. where a Participial adjective precedes a Simple adjective. Some of these Participial adjectives turn out to be emotive, and we will use the feature of "emotive" as a feature that brings the emotive Participial adjectives closer to Simple adjectives²². For instance, the emotive Participial adjectives accept modification by intensifiers such as *jiddan* "very". The discussion here bears directly in the discussion in Chapter VII.

Arabic participles differ from English ones in having various patterns, as exemplified in Table (1) above. The discussion on the English participles relating to whether a form that takes the *-ing* suffix is a participle or an adjective is similar to that on Arabic adjectives in pattern /FaaCiL/, but only with respect to the pattern /FaaCiL/, since other Simple and Participial adjectives occur in other various patterns. Therefore, distinguishing other Simple adjectives from the Participial ones are much easier because they do not share similar patterns. Thus, it is interesting to study this pattern, /FaaCiL/, and find the various criteria according to which the two type of adjectives are distinguished. In what follows we will consider briefly how this problem is accounted for in English, particularly, by Brekke (1988). Then, following Brekke (1988), we will try to extend his account to Arabic. However, because of the difference noted above we will not follow Brekke step by step.

Various scholars have analyzed English participles, particularly with respect to a putative correlation between certain morphological processes in the participle and whether or not it accepts modification by *very*. In other words, they try to distinguish between various participles. Thus, although, *sleeping* or *jumping* take the *-ing* suffix, are regarded as verbs and therefore, they cannot accept modification by *very*. On the other hand, the same *-ing* forms in *amusing* or *interesting* are considered as adjectives and therefore, they do accept modification by *very*. For example, Hust (1977), Fabb (1984), Brekke (1988)

and Milsark (1988) have all argued from different theoretical grounds, which do not concern us here, for the distinction between the two *-ing* forms occurring in (12) and (13) respectively :

- 12.a the jumping cow.
- 12.b the flying spacecraft.
- 12.c the sleeping beauty.
- 13.a the amusing story
- 13.b the interesting film.
- 13.c the annoying weather.

The distinction between the two sets of examples is based on the following characteristics :

- a. The *-ing* adjectives accept modification by "very", e.g. *very interesting /annoying /confusing*
- b. The *-ing* adjectives will form adverbs by adding *-ly* , since this rule requires an adjective as input, e.g. *interestingly, amusingly, surprisingly*.
- c. the *-ing* adjectives take the prefix *un-* ²³.

Thus although these two sets are similar in taking the suffix *-ing*, they are distinguished from each other on the basis of other related morphological and syntactic criteria. Brekke observes that the set of examples in (12) represents physical process predicates as opposed to that in (13) which represents emotive predicates, which Brekke (1988) defines thus :

"The term *emotive* predicates refers to a large group of causative verbs denoting emotional impact of some kind; its members freely generate *-ing* forms of not only verbal but also **truly** adjectival character (emphasis mine)."

Brekke also observes that there is another type called dual physical/emotive predicates, as in (14-15).

- | | | |
|------|---|--------------------------------|
| 14.a | an arresting thought / a very arresting thought | (emotive reading) |
| 14.b | *an arresting police / *a very arresting police | (physical reading) |
| 15.a | The French are very revolting | (emotive reading only) |
| 15.b | The French are revolting | (physical or emotive readings) |

Other examples of emotive predicates given by Brekke are : *amaze, amuse, baffle, disgust, enrage, fascinate, humiliate, intrigue, mystify, overwhelm, please, surprise, thrill, worry*. Brekke demonstrates that the contrast between the two sets of examples relates to the absence or presence of what he calls "Experiencer NP in nonsubject position" (henceforth B-Experiencer).

Other examples of the dual physical/emotive predicates are *revolt, move, touch* which allow both a physical process reading with a-Experiencer, and an emotive reading, with B-Experiencer. This shows that the emotive denotation is only a necessary but not a sufficient condition since consideration of the types of Experiencer seems to be crucial. Therefore, Brekke hypothesizes that emotive predicates with B-Experiencer produce *-ing* adjectives, whereas those with an a-Experiencer do not. This is extended to perceptive predicates such as *regard*, which are assumed to have an a-Experiencer as opposed to the perceptive predicates such as *sound*, which has a B-Experiencer. He argues that B-Experiencer whether emotive or perceptive predicates are true adjectives since they can produce *-ing* adjectives²⁴. In other words, while all verbs produce *-ing* participles, only B-Experiencer ones can also produce *-ing* adjectives.

It is also important to note that since the emotive vs nonemotive Participial adjectives are not distinguished by other morphological criteria we will postulate other criterial features which apply to Arabic only, according to which the various types of adjectives including emotive Participial are distinguished. We shall divide the /FaaCiL/ adjectives into three main types,

- | | | | | |
|------|------------------------|---------------|-------------|----------|
| i. | Simple adjectives | <i>baarid</i> | "cold" | /FaaCiL/ |
| ii. | Participial adjectives | <i>ṭaahib</i> | "going" | /FaaCiL/ |
| iii. | Participial adjectives | <i>qaabiD</i> | "arresting" | /FaaCiL/ |

of which only type (i) can inflect for the comparative and superlative and occur in the exclamatory *ma* construction. However, with respect to modification by intensifiers, we bring into the discussion Brekke's distinctions and argue that emotive Participial adjectives, like Simple adjectives, can be modified by *jiddan* "very". Although this property makes the Participial adjective similar to Simple adjectives, this similarity does not correlate with any morphological one. However, other tests, developed in the course of the analysis, are available. It will be argued that only type (iii) can take an accusative complement, the object clitic *-nii* "me", and can be characterized by optional coindexing in what is called *sababi* construction. Type (ii) is distinguished from type (iii) not only on the basis of the accusative NP complement and the clitic *-nii* "me" but also on the basis of the last criteria, i.e. type (ii) is not obligatorily coindexed in the *sababi* construction (see example 36). Simple and Participial adjectives, i.e. types (i-iii) turn out to contrast sharply with denominal adjectives, which will be discussed in Chapter VI, since the former are derived from corresponding verbs whereas the latter derived from a nominal base by means of the suffix *-iyy*. Finally, we will see that these criterial features require semantic distinctions to be taken into account. We shall show that the corresponding verbs from which the three types are derived differ since they divide sharply into [state], as in the corresponding verbs of type (i), and [action], as in the corresponding verbs of types (ii) and (iii). The importance of the distinction in this section relates to the order of the various types in a sequence²⁵. Consider the following examples :

16.a ?ana caaqilun

I wise

"I am wise".

(F55)

16.b ?al-?ayaam-a ?al-qaasiy-at-a

the-days-ACC the-hard-Pl.F.-ACC

"The hard days".

(A26)

16.c ?ila ?alqabr-i ?al-baarid-i

to the-tomb-GEN the-cold-GEN

"To the cold tomb".

(J142)

- 16.d ?al-gurfatu waasic-atun jiddan
 the-room wide-F.Sg.-NOM very
 "The room is very wide". (B45)

- 16.e naraa jay?-an Tariif-an jiddan
 see something-ACC pleassant-ACC very
 "We see someting very pleasant". (A50)

Like Participial adjectives, simple adjectives occur in the /FaaCiL/ pattern, as exemplified by the underlined adjectives in (16), and it is important to distinguish the two types. All the above adjectives can be modified by intensifiers such as *jiddan* "very", as shown in (16.d) in which the adjective *waasic*- "wide" which belongs to pattern /FaaCiL/ is modified by the following intensifier *jiddan* "very". In (16.e) the adjective *Tariif*- "pleasant", shows the same fact, however, it does not belong to the pattern /FaaCiL/. This shows that Simple adjectives whether belonging to the pattern /FaaCiL/ or not accept modification by intensifiers.

Considering the Participial adjectives, we find that some are "emotive". Emotive predicates relate to the Participial /FaaCiL/, which, like the central Arabic adjectives, i.e. Simple adjectives, accept modification by *jiddan* "very". In this connection the following are illustrative examples.

- 17.a wa ?an-naZrati ?al-faatinati
 and the-look the-facinating
 "And the facinating look". (J59)

- 17.b TumuuHa-hu ?al-Haa?iru
 ambition-his the-confusing
 "His confusing ambition". (K74)

- 17.c min ?at-tjaarubi ?aT-TaaHinati
 from experiences the-smashing
 "From the smashing experiences". (K69)

17.d bi ragbatin qaahiratin

with desire overpowering

"with an overpowering desire"

(I136)

17.e wa ?an-naZrati ?al-faatinati jiddan

and the-look the-fascinating very

"And the very fascinating look".

The underlined items in (17) all occur in the pattern /FaaCiL/ and belong to "emotive" predicates. They can be modified by *jiddan* "very", as in (17.e), which is (17.a) repeated with the intensifier *jiddan* "very" modifying ?*al-faatinati* "the fascinating". On the other hand, although the underlined items in (18) belong to the same pattern they are different since they do not allow modification by intensifiers such as *jiddan* "very".

18.a caalam ?at-taqwaa ?aZ-Zaahiri

world the-fear the-appearing

"The appearing world of fear".

(D70)

18.b ?ila ?al-?akwaaxi ?an-naa?imati

to the-caves the-sleeping

"To the sleeping caves".

(I414)

18.c ?ila ?al-baxuuri ?as-saabiHi fi ?al-hawaa?i

to the-vapor the-swimming in the-air

"To the perfume swimming in the air".

(I229)

18.d *caalam ?at-taqwaa ?aZ-Zaahiri jiddan

world the-fear the-appearing very

"The very appearing world of fear".

The underlined items in (18), unlike those in (17), belong to the physical process predicates, (cf. Brekke 1988), which do not tolerate intensifiers such as *jiddan* "very".

Therefore, (18.d) is asterisked. The participles in (18) are derived from intransitive verbs whereas those in (19) are derived from transitive verbs.

- 19.a wa Hafiidun qaatilun
and grandson killing
"And a killing grandson". (I460)
- 19.b wa hiya tanqabiD fi taJannujin qaatiliin
and she suffers in fit killing
"And she suffers in a killing fit". (B90)
- 19.c ?af-furTiyyu ?al-qaabiDu
the-policeman the-arresting
"The arresting policeman".
- 19.d ?al-jawwu ?al-qaabiDu
the-weather the-arresting
"The arresting weather" (B47)
- 20.a *wa Hafiidun qaatilun jiddan
and grandson killing very
"And a very killing grandson".
- 20.b *?af-furTiyyu ?al-qaabiDu jiddan
the-policeman the-arresting very
"The very arresting policeman".

The underlined participles in (19) show that there is ambiguity between physical process and emotive readings. The same participle occurs in (19.a and b), namely, *qaatilun* "killing". However, in the former it has a physical process reading whereas in the latter it has an emotive reading. Therefore (20.a), which has a process reading, and corresponds to (19.a) does not tolerate *jiddan* "very", consequently it is asterisked. The same observation applies to (19.c-19.d) in which the participle *qaabiDun* "arresting" has a physical process

reading in (19.c) and an emotive reading in (19.d). (20.b), corresponding to the physical process reading in (19.c), is unacceptable and therefore asterisked.

The above ambiguity is found in our data. We counted 46 examples in which the intensifier *jiddan* "very" occurs. Other intensifiers such as *Haqqan* "verily or truly" also occurs in 23 examples modifying Simple adjectives of various patterns. In only 3 examples is there a Participial adjective modified by an intensifier, as shown in (21). Since these Participial adjectives do not belong to the pattern /FaaCiL/, we present them separately, but the same generalization applies.

- 21.a ?inna camala-ka musallin jiddan
 truly work-your interesting very
 "Truly your work is very interesting". (G34)
- 21.b daa?iman huwa mustariiHun jiddan
 he relaxed very
 "He is very relaxed". (B53)
- 21.c haaʔa muxiifun Haqqan
 this frightening verily
 "This is very frightening". (C133)

In (21) the underlined items are Participial adjectives belonging to patterns other than /FaaCiL/ but are subject to the same generalization as to the Participial adjectives of the /FaaCiL/ pattern, namely they all occur with a following intensifier. For instance, the Participial adjective *musallin* "interesting" is modified by the following intensifier *jiddan* "very", and the Participial adjectives in (21.b, c) also have intensifiers. This shows that emotive Participial adjectives are not restricted to the Participial pattern of /FaaCiL/ and that a correlation exists between emotive reading and accepting *jiddan* "very". The physical process reading correlates with the rejection of *jiddan* "very", as in (20). The following are just few examples of emotive Participial adjectives. Notice that not all of them belong to the /FaaCiL/ pattern.

Haaniq "annoying", *faaDiHun* "thrilling", *faatin* "fascinating", *Haa?ir* "confusing", *qaahir* "overpowering", *TaaHin* "smashing", *naafiδ* "penetrating", *θaaqib* "penetrating", *musallin* "interesting", *mustariiH* "relaxed", *muxiif* "frightening", *maδcuur* "frightened", *marcuub* "frightened", *macTuub* "damaged", *magruur* "conceited", *maδduud* "tied", *majHuun* "loaded".

These are just few examples of emotive Participial adjectives which resemble Simple adjectives in correlating with *jiddan* "very" and having a result reading. More examples are found in Appendices II and IV.

Since there are two possible readings : emotive reading and physical process reading - which correlate with the same intensifier, other tests are needed to distinguish between the above three types of /FaaCiL/ adjectives. That is, although the test of modification by intensifiers seems to be useful, it is not sufficient to provide a clear distinction among the various types of Arabic adjectives.

The second test is whether an adjective has a comparative form or not, i.e. whether it can take the comparative prefix *?a-*. It is important to note that this test differs from the corresponding one in English which takes into account the number of syllables in a word : *nice ~ nicer*, *beautiful ~ *beautifuler*. What is important in Arabic is that the various adjectives, Participial or Simple, belong to the same pattern /FaaCiL/ and have the same root. This means that the acceptance or rejection of the comparative prefix is not controlled morphologically. For instance, the Simple adjective, *baarid* "cold" and the Participial adjective *saabiH* "swimming", for example, are morphologically similar, but only the former can take the comparative prefix *?a-*. In this connection consider (22)-(23).

22.b *?inna-haa ?a-cqalu*

truly-she more-wise

"Truly she is wiser".

(C152)

22.a *wa Hadaθ ma huwa ?a-qsaa min haaθa*

and happened what it more-hard than this

"And something harder than this happened".

(E8)

- 23.a *ʔan-naZrati ʔa-ftanu
 the-look more-fascinating
 "The look is more fascinating".
- 23.b *ʔal-jawwu ʔa-qaabiD
 the-weather more-arresting
 "The arresting weather"
- 23.c *ʔat-taqwaa ʔa-Zaahiri
 he-fear more-appearing
 "The more appearing fear".

The examples in (22) show that only Simple adjectives can take the comparative prefix *ʔa-*. On the other hand, The Participial adjectives in (23) whether with an emotive reading, as in (23.a) or a physical process reading as in (23.c) cannot take the comparative prefix. (23.a-c) also show that it is irrelevant whether the Participial adjective is derived from a transitive or intransitive verb, since in both cases they cannot be prefixed by the comparative *ʔa-*. As mentioned earlier, this restriction is not morphologically controlled since Participial and Simple adjectives share the same pattern. Moreover, there is a correlation between taking a comparative form and accepting modification by intensifiers such as *jiddan* "very". In other words, adjectives that take the comparative form can also be modified by *jiddan* "very". The simple generalization we derive from this is that Simple adjectives, unlike, Participial, can take the comparative prefix, i.e. type (i) differs from types (ii) and (iii) since it can take the comparative prefix *ʔa-*.²⁶

Related to the comparative construction, is the exclamatory *ma* "how" construction. The adjectives following the exclamatory *ma* "how" must take the comparative prefix *ʔa-*. In (24) for instance, the comparative forms of the adjectives, *taafih* "trivial", *caʔb* "sweet", *qawiy* "strong" and *jamiil* "beautiful", are *ʔatfah* "more trivial", *ʔa-cʔab* "sweeter", *ʔa-qwaa* "stronger", and *ʔa-jmal* "more beautiful", respectively. These adjectives follow the exclamatory *ma* "how". On the other hand, Participial adjectives, whether derived from

intransitive or transitive, or whether have emotive or physical process readings, cannot occur in the *ma* construction as shown in (25).

- 24.a *ma* ?a-tfah ?al-wuquuf
 how trivial the-stop
 "How trivial the stop is!". (I249)
- 24.b *ma* ?a-cḥaba ?al-Hurriyata
 how sweet the-freedom
 "How sweet freedom is!". (D43)
- 24.c *ma* ?a-qwaa kawaahila haa?ulaa? ?ar-rijaal
 how strong shoulders these men
 "How strong the shoulders of these men are!". (C21)
- 24.d *ma* ?a-jmala haaḥa ?aS-SabaaH
 how nice this morning".
 "How nice this morning is!". (C87)
- 25.a **ma* ?aḥhab ?alwalad
 "how going boy!".
- 25.b **ma* ?aqtal ?al-walad
 "How killing the boy!".
- 25.c **ma* ?a-qtala ?at-taḥannuji
 how killing the-fit
 "How killing is the fit!".

The underlined Simple adjectives belong to various patterns : in (24.a) the adjective belongs to the pattern /FaaCiL/, *taafih* / ?a-tfah "trivial/more trivial"; and those in (24.b-24.d) belong to other patterns of the Simple adjectives : /FaCL/ *caḥb* / ?a-cḥab "sweet/sweeter", /FaCiL/ *qawiy* / ?a-qwaa "strong/stronger", and /FaCiiL/ *jamiil* / ?a-jmal "beautiful/more beautiful", respectively. They all can occur in the exclamatory *ma* "how" construction. On the other hand, the Participial adjectives in (25) cannot occur in the same

construction whether having a physical process reading as in (25.a-25.b) or an emotive reading, as in (25.c).

The next feature which we will consider is whether or not an adjective can take an accusative complement, either a NP or a clitic pronoun such as *nii*- "me". These features divide the Arabic adjectives into two types : type (i) and type (ii), which cannot be characterized by this feature as opposed to type (iii), which can. That is, only Participial adjectives derived from transitive verbs can take an accusative complement or the object suffix *-nii* "me". Although these two features distinguish clearly between the members in type (iii) as opposed to the other ones in types (i) and (ii), they are only applicable to Form I of the participles, i.e. they do not distinguish between any Form of the participle of type (iii) and the rest. This restriction can be stated as follows²⁷ :

- (a) For Form I of the participle only, only members of type (iii) can take the object clitic *-nii* or an accusative NP.

This means that only Form I is relevant, and Form I is considered as basic or unmarked in the standard grammar books. The following examples illustrate the point :

Verbs	Participles
26.a calay-un Daraba-nii Ali-NOM hit-me "Ali hit me".	26.b caly-un Daaribu-nii Ali-NOM hitting-me "Ali is hitting me".
27.a * calay-un jalasa-nii Ali-NOM sat-me "Ali sat me".	27.b * calay-un jaalisu-nii Ali-NOM sitting-me "Ali is sitting me".

28.a caly-un qaatala-nii
Ali-NOM fought-me
"Ali fought me".

29.a calay-un jaalasa-nii
Ali-NOM sat-me
"Ali sat with me".

30.a caly-un Darraba-nii
Ali-NOM hit-me
"Ali hit me, intensively".

31.a caly-un jallasa-nii
Ali-NOM sat-me
"Ali made me sit"

28.b caly-un muqaatilu-nii
Ali-NOM fighting-me
"Ali is fighting me".

29.b caly-un mujaalisu-nii
Ali-NOM sitting-me
"Ali is sitting with me".

30.b calay-un muDarribu-nii
Ali-NOM hitting-me
"Ali is hitting me intensively".

31.b caly-un mujallisu-nii
Ali-NOM sitting-me
"Ali made me sit".

The examples in (26-27) show Form I of the participles and their corresponding verbs. The participle in (26) is of type (iii), i.e. derived from a transitive verb as opposed to that in (27) which is of type (ii) i.e. derived from intransitive verbs. The former accepts the clitic *-nii*, whereas the latter does not accept it. This clearly shows that the participles in type (iii), unlike those in type (ii), take the clitic *-nii*. On the other hand, the examples in (28-31) show that both types can take the same clitic. However, they occur in other participial Forms, rather than Form I. The examples in (28-29) are in Form III, and those in (30-31) are in Form II. Therefore, the test for the clitic *-nii* is a distinguishing criterion only with respect to Form I. It is also important to note that these Participial Forms, i.e. Form III and Form II are regarded as more transitive by Travis (1979 : 17). Also Saad (1982 : 74) and DeMiller (1988) observe that Form II of the verb is causative which can turn an intransitive verb into a causative one. This is probably why they share with Form I the same characteristics, i.e. take the clitic *-nii* "me". If this is true, it means that forms II and III being transitive, do not conflict with our generalization in (a), i.e. they do not conflict because they are transitive. Alternatively, the generalization must be restricted to Form I, as stated in (a) above. Whatever solutions, the fact is that type (iii) differs from types (i) and (ii) since in Form I only type (iii) can take an accusative complement. But since we limited

the scope of this study to Form I we will take the generalization which restricts the application to Form I of the participle.

The next criterial feature which we will consider is whether or not adjectives have corresponding passive participles. As type (i) cannot have a corresponding passive participle, (32.b) is unacceptable. However, type (ii) can. But such type (ii) passive participles differ from those corresponding to type (iii) in taking a prepositional object, which MUST be coindexed with the head noun, as in (33.c). On the other hand, all members in type (iii) can have this feature as in (34).

Type i

32.a ?al-jawwu baaridun

the-weather cold

"The weather is cold".

(G112)

32.a *?al-jawwu mabruudun

Type ii

33.a kaana jaalisan fi ?al-firaaʃi

was sitting on the-bed

"He was sitting on the bed".

(I350)

33.b *huwa majluusun

he is being sat

33.c huwa_j majluusun calay-hi_j

he is sat on-him

"He is being sat on, i.e. somebody sat on him".

The adjective in (32.a) belongs to type (i) which has no corresponding passive participle, cf. the unacceptability of (32.b). The examples in (33) belong to the Participial adjective of type (ii), which also lacks corresponding passive participles cf. the unacceptability of (33.b). However, (33.c) which belongs to the same type, i.e. type (ii) shows that they can have a corresponding passive participle. The type (ii) participles only occurring in construction containing a pronoun referring back to the head noun -in (33.c)

the clitic pronoun *-hi* "him" refers back to *huwa* "he". The passive participles corresponding to members in type (iii) are not subject to this restriction, cf. (34).

Type iii

34.a caly-un qaatil-un ?al-walad-a

Ali-NOM killing-NOM the-boy-ACC

"Ali is killing the boy".

34.b caly-un maqtuul-un

Ali-NOM killed-NOM

"Ali is killed"

Therefore, type (iii) differs from (i) and (ii) with respect to its corresponding passive participles, since it does not require the presence of a coindexed pronoun.

The next criterial feature which we will consider relates to whether an adjective can or cannot occur in the *sababii* construction with a coindexed pronoun. The *sababi* is the noun which takes a pronoun referring back to the preceding modified head (cf. Hasan 1974 Vol : 437)²⁸. That is, the *sababi* consists of a N modified by an AP. Inside the AP is a pronoun coreferential with the head N. When an adjective of type (i) or (ii) occurs in the *sababi* construction, the *sababi*, like *qalbu*- "heart" in (35.a), MUST take a pronoun which is coindexed with the preceding head noun *rajulan* "man", as shown in (35-36). Therefore, (35.b) and (36.b), in which the *sababi* does not take a coindexed pronoun are asterisked.

Type i

35.a ra?aytu rajul-an; Tayyib-an qalbu-hu;

saw-I man-ACC good-ACC heart-his

"I saw a man good in his heart."

35.b *ra?aytu rajul-an; Tayyib-an ?ibnu-hum;

saw-I man-ACC good-ACC heart-his

"I saw a man good in their heart."

Type ii

36.a ra?aytu rajul-an_i waaqif-an facru-hu_i

saw-I man-ACC standing-ACC hair-his

"I saw a man standing his hair (whose hair (is) standing)".

36.b *ra?aytu rajul-an_i waaqif-an facru-ha_j

saw-I man-ACC standing-ACC hair-her

"I saw a man standing her hair".

The underlined adjective occurring in (35.a) belongs to type (i), i.e. is a Simple adjective, and the pronoun *-hu* "his", attached to *sababi*, must be coindexed with the modified head noun *rajul-an* "a man". When this pronoun does not refer to the preceding head noun, the result is unacceptable, as in (35.b) where the pronoun *-hum* "their" does not refer to the head noun *rajulan* "man". The same is true when an adjective of type (ii) occurs in the *sababi* construction as in (36), where (36.b) is asterisked for the same reason. This shows that type (i) and type (ii) can be similar with respect to this feature. It is also important to note that the modificational function of the participle is the same as that of the Simple adjective. On the other hand, when an adjective of type (iii) occurs in the *sababi* construction the pronoun attached to the *sababi* may not refer back to the preceding modified head noun, as shown in (37).

Type iii

37.a ra?ay-tu rajul-an_i qaatil-an ?ibnu-hu_i

saw-I man-ACC killing-ACC son-his

"I saw a man killing his son".

37.b ra?ay-tu rajul-an_i qaatil-an ?ibna-hum_j

saw-I man-ACC killing-ACC son-their

"I saw a man killing their son."

The examples in (37) show that coindexing, with the head noun when type (iii) occurs in the *sababi* construction, is not required. Therefore, examples (37.a), where the pronoun is coindexed, and (37.b), where the pronoun is not coindexed, are both acceptable. This clearly shows that a distinction between members in type (i), and (ii), on the one hand, and members in type (iii), on the other hand, is accounted for by the criterion of obligatory coindexing in the *sababi* construction for the former types only.

The criterion relating to whether or not an adjective has a corresponding verb form I, is not crucial in distinguishing among members of the different three types and will not be discussed. All Simple adjectives, except very few, and all Participial adjectives have corresponding verb Form I. We included this feature here in order to distinguish between Simple and Participial adjectives, on the one hand, and denominal adjectives on the other, which are derived from noun bases by the suffix *-iyy* (see the discussion of the denominal adjectives in Chapter VI). This is the only importance of this feature. On the other hand, adjectives like *Taazij* "fresh", for example, have no corresponding form I, or any other verb Form. Similar adjectives are *faaqic* "bright", *baahiZ* "expensive", *Haa?if* "trivial", *jaahiq* "high". These are the only examples of type (i) which do not have corresponding verb from which they are derived. It is clear that these are exceptional. This is probably why they cannot take the comparative and superlative forms.

The three types differ semantically. The verbs from which type (i) is derived denote states with non-agent participants, whereas types (ii) and (iii) denote action with [agent] participants. Consider the following examples :

38.a ?imra?atun taciisatun

woman sad

"A sad woman".

(G97)

38.b tacisat ?al-?imra?atu

The woman is sad

39.a ka ?an-nafsi ?an-naZiifati

like the-soul the-clean

"Like the clean soul".

(C167)

39.b naZufat ?al-madiinatu

clean the-city

"The city is clean".

The adjectives in (38.a) and (39.a) belong to type (i). The underlined items in (38.a) and (39.a) are Simple adjectives, and those in (38.b) and (39.b) are their corresponding verbs. The verb in (38.b) expresses the state of the accompanying noun, which is [experiencer] -?al-?imra?atu "the woman" is [experiencer]. The participant occurring in (39.b), ?al-madiinatu "the city", is [neutral]. This shows that the participant roles accompanying type (i) verbs are non-agent as opposed to those accompanying verbs corresponding to types (ii) or (iii) which are [agent], and their verbs are [action], as shown in (40) and (41) respectively.

40.a fi Harakatin raaqiSatin

in movement dancing

"In a dancing movement".

(C130)

40.b raqaSa ?ar-rajulu

danced the-man

"The man danced".

41.a wa Hafiidun qaatilun

and a killing grand-son

"And a killing grand-son".

(I460)

41.b qatala calayun ?al-binta

killed Ali the-girl

"Ali killed the girl".

The underlined items in (40.a) and (41.a) are Participial adjectives of types (ii) and (iii), respectively. Their corresponding verbs in (40.b) and (41.b) express [action], and the accompanying nouns are [agent]. In (40.b), for example, the participant ?ar-rajulu "the man" is the agent who performs the dancing. (38.b) and (39.b) cannot occur as an answer

to the question *maʔaa Hadaθ* "what happened". For example, *tacisat ?al-?imra?atu* "the woman is sad", in (39.b), is not allowed as an answer to the question *maʔaa Hadaθ* "what happened", as opposed to (40.b), for example, in which *raqaSa ?ar-rajulu* "the man danced", which can. The same is true for the examples in (39.b) and (41.b). That is, only [action] propositions can occur as an answer to this question. Another difference is that [state] propositions generally do not have corresponding Form I imperatives whereas [action] propositions do, as shown in (42), below.

- 42.a *ʔitcas
 "sad, i.e. be sad"
 42.b ʔurquS
 "dance"
 42.c ʔuqtul-ha
 "kill-her"

The above examples show that only [action] propositions such as those in (40.b) and (41.b) can have corresponding imperatives. (42.a), exemplifying a state, is unacceptable. Moreover, the [action] propositions with [agent] can generally be questioned by : *maaʔa [faacil] camil* "what did [agent] do" and [action] propositions such as those in (40.b) or (41.b) can occur as an answer to this question, but not [state] propositions in (38.b) and 39.b).

To sum up, the various features employed in this section along with some examples of each type are summarized in Table (4) below, where the (+) means that the corresponding adjective takes the relevant feature, (-) means it does not, and (*) means that the form is exceptional with respect to the relevant feature. The reader is invited to consult Appendices II and IV for more examples.

Adjectives	Gloss	Exclamatory <i>ma</i> "how"	Comparative	<i>jiddan</i> "very"	Accusative NP	Clitic <i>nii</i> "me"	Passive	<i>sababii</i> Coindexing	Corresponding V	Action
baahiZ	expensive	-	-	+	-	-	-	+	*	-
Taazij	fresh	-	-	+	-	-	-	+	*	-
baarid	cold	+	+	+	-	-	-	+	+	-
caadil	just	+	+	+	-	-	-	+	+	-
caaqil	wise	+	+	+	-	-	-	+	+	-
haadi?	quiet	+	+	+	-	-	-	+	+	-
jaamid	solid	+	+	+	-	-	-	+	+	-
DaaHik	laughing	-	-	-	-	-	-+	+	+	+
jaalis	sitting	-	-	-	-	-	-+	+	+	+
raaqid	sleeping	-	-	-	-	-	-+	+	+	+
δ aahib	going	-	-	-	-	-	-	+	+	+
saabiH	swimming	-	-	-	-	-	-	+	+	+
Haadiθ	happening	-	-	-	-	-	-	+	+	+
Daarib	hitting	-	-	-	+	+	+	-+	+	+
qaatil	killing	-	-	-	+	+	+	-+	+	+
raakib	riding	-	-	-	+	+	+	-+	+	+
naafiδ	penetrating	-	-	-+	+	+	+	-+	+	+
qaabiD	arresting	-	-	-+	+	+	+	-+	+	+
TaaHin	smashing	-	-	-+	+	+	+	-+	+	+

Table (4)

Clearly no one feature is criterial. The decision as to the classification of a given item depends on how many features apply to it and how many do not. In other words the features postulated above must be taken together rather than separately. This also shows that not all members within the same type must take the same features since it is shown that adjectives which belong to the same type may behave differently with respect to a specific feature. Thus if it is found that some members of type (iii), for instance, have feature 3 (modification by *jiddan* "very"), it does not mean that these members belong to type (i) unless all the other features used to distinguish type (i) are applicable to them.

5.3 Concluding Remarks :

This Chapter has discussed the traditional analysis of Arabic participles as nominal or verbal and has proposed instead that participles are (not central) adjectives. This proposal is consistent with the morphology of the Arabic participle, and with the predominant syntactic function of the participle as occurring in our data. Criterial features have been proposed for distinguishing Simple and Participial adjectives. Simple adjectives, unlike Participial, take the comparative and superlative, occur in the exclamatory *ma* "how" construction, and can be modified by intensifiers such as *jiddan* "very". The verbs from which they are derived express a [state] and the accompanying noun is non-agent. These verbs do not have a corresponding Form I imperative, which is a characteristic feature of [state].

On the other hand, Participial adjectives, like Simple, can attribute a "property" to the modified head noun with which they constitute an endocentric construction. They also can occur attributively as well as predicatively. However, unlike, Simple adjectives, they do not inflect for the comparative or superlative, do not occur in the exclamatory *ma* "how" construction, nor do they accept modification by intensifiers, except the emotive ones. The verbs from which they are derived express [action] which are accompanied by [agent] participants. They have corresponding imperative verbs. Moreover, the Participial adjective of type (ii) is further distinguished from that of type (iii) in requiring coindexed pronoun in the *sababii* construction, in not having a corresponding passive of Form I, and in taking neither accusative complements nor the suffix *-nii* "me". Semantically the [action] expressed in type (ii) corresponding verbs does not extend to a "patient". Finally Simple and Participial adjectives derived from verbs, whereas denominal adjectives have a noun base.

- 1 Participles show very systematic relation with their corresponding verbs. The participial Forms from I to X have corresponding verb Forms from I-X, which are completely different morphologically.
- 2 McCarthy uses the term 'binyanim' which corresponds to our term 'Forms'. It must be noted that this term is used by Hebrew grammarians as noted by McCarthy (1985 : 239):

"The system of the triconsonantal verb is based on fifteen derivational categories, which I will refer to by the traditional Hebrew term binyanim (sg binyan)"

On the other hand, we will use the term Form or pattern to refer to the same phenomenon, i.e. Form I of the active participle, for example, is also called pattern /FaaCiL/. But notice when we use pattern we have to specify which one and when we use form we just refer to the number of the Form according to Table (1).

- 3 It must be noted that we are not concerned with the difference between the two schools since the difference in argumentation between the two schools is not always among all the grammarians of the school because some times you find that a grammarian from one school agreeing with another one from the other school (cf. AlTawiil 1984 : 84). It is also important to note that this issue is full of difficulties as observed by Mitchell (1978 : 229) who studies the Arabic participle in two dialects and states that :

"One such 'black hole' in the Arabic universe is accentuation, about which I have written elsewhere; another is the aforementioned participle."

However, we will discuss the issue as briefly as possible trying to relate it to adjectives. The readers interested in the debate between the Basra and Kufa schools are referred to Al-Tawiil (1984) specially page 607 in which he mentioned a list of references.

- 4 Similar examples occur in Ibn Yaciish Vol VI (pages : 67 and 76) which show two important points :
 1. It is well known that "the occurrence of adverbials often justifies semantic analysis of formal distinctions" (cf. Palmer, F.K. 1974 : 42 in his book : The English Verb. Longman). Moreover, "the use of adverbials will often justify some of the semantic distinctions that are not formally marked" (cf. Palmer, F.K. 1974). But since the participle does not have a fixed tense it can cooccur with perfective and imperfective time adverbs.
 2. The participial object complement takes the accusative case marking with the perfective time adverbs whereas it takes the genitive case marking with the imperfective time adverbs as shown in the examples below :
 - 1.a ha&a Daarib-un Zayd-an gadan
 - 1.b ha&a Daarib-un Zayd-in ?ams
 - 1.c *Zayd-un Darib-un camr-an ?ams

The example in (1.a) shows that the object occurs in the accusative since there is an imperfective time adverb, however, the same constituent occurs in the genitive in (1.b) since there is a perfective time adverb. Example (1.c) is unacceptable since the perfective time adverb and the accusative case marking cannot cooccur.

But Ibn Yaciish considers, *baasit-un* "stretching", in "the cave surat" in which the participle makes reference to the perfective, an exception (cf. Ibn Yaciish, Vol VI :76). Notice that the Kufan Al-kisaa'i uses the same example to argue that the object complement of the participle can occur in the accusative when reference is perfective in the sentence. This clearly shows that the participial object can occur in the accusative or genitive when reference is perfective or imperfective.

- 5 Notice that in both examples (1.a) and (1.b) various time adverbs can occur.
- 6 These examples are presented in Maxzumi (1986 : 116) who quotes the Kufan grammarian Al-farraa' (died 822) in his book *macani ?al-qur'an* (The meanings of The Quraan) (issue No. 72). See also Saamuraa'i (1983 : 38).
- 7 SuyuTi (1977 Vol III : 223-224) Al-Ashbaah wa Al-nazaa'ir
- 8 Maxzumi (1986 :116) and Samurraa'i (1983 : 38) quoting Al-farraa'.
- 9 Notice that (iii) is actually (ii) with a "future" time-reference. Therefore (ii) can indicate either "future" or "past".
- 10 This is the same argument advocated by a number of scholars in English. Randall (1984 : 324) observes the behaviour of the English participle and states that "when the Theme appears the process reading is the only one available when it is deleted, the result reading is available". This point will be discussed further in due course.
- 11 See the discussion of the construct phrases in Chapter II, in which it is noted that only participles, as first members in the construct phrase, can take "nunation"
- 12 These are just few untypical examples. A full treatment of adjective and participle complementation is in §7.3.
- 13 See Maxzumi (1986 : 115) see also Hasan (1974 Vol III : 247) and Owens (1988 : 67).
- 14 Notice that the imperative for the Kufan is one of the muDaaric type, i.e. imperfective.
- 15 Notice that the above quotation reflects only the traditional Arab grammarians' view since Owens did not state what he thinks about the Arabic participle.
- 16 Notice that this possibility is naturally ruled out by the traditional Arab grammarians since they do not postulate a separate word class for adjective.
- 17 The other 14 % are denominal adjectives occurring either attributively, 1221 (14.8 %), or predicatively 17 examples (0.2 %).
- 18 There are more than one *ma* in Arabic. There is the negative *ma* as in *ma MuHammadun ?ustaa?un* "Mohammad is not a teacher". There is also the interrogative *ma* which can be interpreted as "what", and the exclamatory *ma* "how" (cf. Cantarino 1975 Vol III 177-179). Wright (1898 Vol II :17) also observes that *ma* can mean "as long as" or "while", i.e. daymuumiyah. The referential *ma* "what" which can occur as object or subject should not be confused with the exclamatory *ma* "how" which we will discuss later in this Chapter, e.g. *ma ?akram ?alcarab* "How generous the Arab are!".

19 Platzack gives the following examples :

1. han blev tilldelad en orden
"He was allotted a decoration"
2. han var trogen sin hustru
"He was faithful (to) his wife"
3. han var fjarran sitt mål
"He was far (from) his goal"
4. han var vardig sin berømmelse
"He was worthy (of) his fame"
5. han är lik sin bror
"He is like his brother"
6. han är överlägsen sin motståndare
"He is superior ((to)) his opponent"

Platzack notes that because of examples corresponding to the English equivalents of (2-6), Bresnan (1978) argues that the English past participle should be analyzed as a verb, not as an adjective. In a footnote, she admits the existence of adjectives which do take direct NP complements, for instance, *worthy*, *like* and *near*, but she prefers to regard these words as exceptions, due to the fact that *like* and *near* are also used as prepositions, and *worthy* is never used attributively. The Swedish adjectives in (2-6) can not be regarded as prepositions, and with the exception of *lik* "like", they can be used attributively.

- 20 The importance of this observation relates to the fact that when various adjectives cooccur in the same NP the adjectives with complements, i.e. comp-A (which are heavier and more verb-like) occur at the end of the sequence preceded by other adjectives. For more on the adjective order see Chapter VII.
- 21 Wright (1898 Vol II : 67) used *nomen agentis* vs *nomen patientis*, Carter (1981 : 148) used agent noun vs patient noun. However, Cantarino Vol II (1975 : 406 et passim) used active and passive participles. We will follow Cantarino and call the participial forms active and passive participles.
- 22 Notice that all the 65 exceptional examples involve only participial adjectives which are less verb-like, i.e. those Participials without complements. That is, those Participial adjectives preceding Simple adjectives are associated with result reading in the sense of Randall (1984) since they do not occur with complements. Moreover, 24 of the 65 are emotive Participial adjectives, and 11 are derived from corresponding intransitive verbs, rather than transitive. This leaves 30 examples which are exceptions to the typical adjective order : Head N + Simple A. + Participial A.
- 23 This is first noted by Siegel (1973). See also Hust (1977) who asserts that the negative *un-* appears only as a prefix to adjectives and their derivatives. For examples, there are adjectives like *unkind*, *untrue*, *uncouth*, deadjectival nouns like *untruth*, *unkindness*, and deadjectival adverbs like *ungracefully*, *unendingly*, and *unusually*. On the other hand, we find no cases where negative *-un* occurs as a prefix to verbs, e.g. **unseen*, **unknown*, to underived nouns, e.g., **unintegration*, **unarrival*, **unresistance*. Hust also observes that the fact that the negative *un-*, which is characteristic of adjectives,

occurs as a prefix to unpassive participles, e.g., *unseen, uncollected, uninhabited*, suggest that they too must be adjectives. Hust (1977) concludes his study by noting that the transformational account of *un-* passive is not appropriate and suggests that such problems will disappear if participles prefixed with *un-* are lexically derived adjectives and are directly inserted in the base.

- 24 Brekke cites the following examples to show the distinction between nonsubject (B-Experiencer) and subject (a-Experiencer) :

- i. *a very guilty-finding jury
- ii. a very nervous-sounding MC

Predicates like *sound*, which is nonsubject, takes B-experiencer, whereas those like *find*, which is a subject, takes a-Experiencer. Therefore, (i) is unacceptable as opposed to (ii) which is acceptable. However, notice that these examples depend on compounding rather than single-word predicates. Moreover, the intensifier in (ii) may be considered to modify *nervous* rather than *sounding*. But since Brekke could not prove the point without bringing the compound, i.e. since **very sounding*, is unacceptable, Brekke tries to argue for it by considering *sounding* in the above compound.

- 25 We will argue that the the general rule when a Simple and a Participial adjectives cooccur in the same NP, is that the Simple adjective precedes the Participial one. However, the exceptional cases mainly relate to the fact that some of the Participial adjectives preceding Simple adjectives are of type (ii) and some are emotive. Notice that type (ii) is less verb-like since it cannot take neither the accusative NP complement nor the clitic *nii-* "me" in Form I.

- 26 It is true that there are some exceptional cases in which we find Simple adjectives do not take the comparative prefix *?a-*. However, this should not reduce the importance of this generalization since Participial adjectives cannot take this prefix. Consideration of other Participial adjectives which belong to other Patterns reveals the same fact. That is, Participial adjectives whether belonging to pattern /FaaCiL/ or to any other Pattern cannot take the comparative prefix *?a-*. Moreover such irregular Simple adjectives which do not take the comparative prefix can be modified by *jiddan* "very", e.g. *Taazij* "fresh", *jaahiq* "high", *baahiz* "expensive", *faaqic* "bright", *haa?if* "trivial". It will be noted that such adjectives do not have corresponding verbs either, which provides further evidence that they are irregular, which probably explains the reason behind their rejection of the comparative. Examples of other Simple adjectives found in the data which do not accept modification by *jiddan* "very" are : *yatiim* "orphan", *Dariir* "blind", *?acraj* "lame", *?acwar* "one-eyed", *caqiim* "barren", *Haamil* "pregnant". Such adjectives are semantically natural in the sense of J. Anderson (1977) "On Syntactic Grammar". Although they belong to the central type of Arabic adjective they do not take the comparative prefix *?a-*. This seems to stem from their semantic properties since they do not allow modification by intensifiers either.

- 27 See Table (1) which displays the various types of participial Forms, i.e. (patterns).

- 28 Although the *sababi* construction is discussed in Arabic, it has not been used as an evidence showing the distinction among the various type of adjectives. This observation is due to this author.

CHAPTER VI
DENOMINAL ADJECTIVES

6.1 Introduction :

The purpose of this chapter is to discuss the morphological, syntactic and semantic properties of denominal adjectives in Arabic. It will be noted that there are two leading approaches regarding the meaning of the denominal adjectives (cf. the views of Szymanek (1985) and Kastovsky (1974)). When a denominal adjective is considered in isolation it is generally not possible to give its exact meaning. It can only be paraphrased in a very general way as "related to/connected to/pertaining to N". Two opposing solutions can be found in the literature. The derivation of Arabic denominal adjectives is discussed and found that those derived from concrete nouns are not predictable as opposed to those derived from quadriliteral action nouns.

According to the first approach denominal adjectives have an endless number of meanings. This theory emphasizes the fact that the only possible paraphrase for a denominal adjective is "pertaining or connected" and therefore, the meanings of denominal adjectives are, in principle, infinite. Advocates for this approach argue that it is not possible to maintain even the two general meanings qualitative vs relational since in English and in other Indo-European languages such as Russian or Polish¹ there are many different suffixes which can be attached not only to denominal adjectives which have "related to" meaning but also to other qualitative adjectives. Thus there are many suffixes which are not restricted to denominal adjectives which parallel their infinite number of meanings. Therefore, denominal adjectives can enter into many different relationships with different head nouns. It is generally claimed that a more specific meaning can be provided only when a denominal adjective occur in enough contextual information. However, this is not the main objection to the second approach since we do not deny the fact that context resolves ambiguity in general. Our main objection is against the claim that the relations are predictable and limited to a number of predicates. The validity of the first approach has been recognized by many Arabic, English and Polish linguists such as Hasan (1976), Heinz (1956), Kastovsky (1974), Szymanek (1985) and Post (1986).

The other opposing approach says that although denominal adjectives are ambiguous between a fixed set of definite meanings these meanings are not infinite and can be limited.

Consequently, it is possible, in principle, to arrive at a systematic, detailed semantic classification of denominal adjectives. Linguists advocating this approach are Ljung (1970), Levi (1976, 1978) and Warren (1984).

Although Arabic denominal adjectives are easily identified morphologically since they take only one suffix, namely *-iyy*, which is attached to a noun base (unlike Simple and Participial adjectives), the meanings of an Arabic denominal adjective out of context are not limited. Their meanings are generally determined by two important factors :

1. morphological shape and
2. syntactic attributive function.

Unlike Simple and Participial adjectives which have many different patterns, Arabic denominal adjectives are a combination of a base noun (e.g. *fams* "sun", *baHr* "sea", *jabal* "mountain") and the suffix *-iyy*. It follows from their morphological structure that the relationship between denominal adjectives and their modified heads actually holds between the base noun and the head noun, e.g. *Taaqatun fams-iyy-at-un* "solar energy". Such an example shows the connection between the head noun *Taaqatun* "energy" and the base noun *fams* "sun" plus the semantic and/or syntactic modification brought about by the suffix *-iyy*. Such an analysis seems to be valid for other languages as well.

It will be argued that Arabic denominal adjectives, being different from the other types of adjectives (Simple and Participial) and having their own peculiar characteristics, must be treated separately. These characteristics can be summarized as follows :

Semantically :

1. They have one common meaning "related in some way to the base noun".
2. Unlike Simple adjectives, they are generally not gradable nor do they accept modification by intensifiers such as *jiddan* "very". Therefore, they do not inflect for the Comparative and Superlative.

Morphologically :

3. They have one suffix *-iyy* and therefore, can be easily identified in contrast to the

other types of adjectives, namely Simple and Participial which have many various patterns.

4. While Participial adjectives are always derived from corresponding verbs and Simple adjectives mainly derived from corresponding verbs, denominal adjectives are almost always derived from corresponding nouns to which one single suffix is added. Related to the feature of having a corresponding verb or not is the fact that the data show that participial adjectives always have corresponding verb Form I. The data also show that the non-participial Simple adjectives, apart from few, have Form I; however those that have denominal, deriving from nouns, subdivides into those which have verb Form I and those which do not².
5. Denominal and Participial adjectives pluralize regularly according to the M. and F. Sound Plural, whereas Simple adjectives take both types of plurals Sound and Broken.

Syntactically :

6. Unlike Simple and Participial adjectives, they generally do not take complements either optional or obligatory.
7. In a sequence of various types of adjectives, the data show that they generally occur next to the modified head noun, preceding the other types of adjectives (since the order in Arabic is NA we say *preceding* while in English we should say *following*).
8. Unlike Simple and Participial adjectives, they mainly occur attributively. Such an observation is absent in the Arabic linguistic literature. Our data show that there are 1238 denominal adjectives. Only 17 of them occur predicatively which constitute 1.4 percent of the total predicative occurrences of all adjectives (see Table 4, in this Chapter). This property rules out any attempt to adopt for Arabic the classical account in which (English prenominal) attributive adjectives are derived from a relative clause in predicative position.

In this study it will be emphasized that even though morphology is very helpful in distinguishing denominal adjectives in Arabic, which uses one suffix, their range of meanings cannot be constrained, since the contribution of the head noun is crucial. This will provide strong evidence supporting the claim advocated in the first approach.

Arabic has a group of 'locatives' indicating various locations to which the denominal suffix is added which have only one possible interpretation, namely 'related to', e.g. (?*amaam-iyy* "related to front", ?*asfal-iyy* "related to bottom", *bayn-iyy* "related to between"), to which the denominal suffix can be added to derive denominal adjectives. Such adjectives cannot be determined semantically according to some "gross definitions", such as those established by Ljung, for example, which claim that there are some limited number of meanings for all the denominal adjectives. But notice if we agree that the head noun contributes crucially to the denominal adjective meaning, then, there must be as many meanings as head nouns. This fact constitutes a major problem for the second approach, stated above, which advocates for a limited specified number of meaning for denominal adjectives.

The denominal possible meaning "related to" is not specified at all, therefore, it can apply to any head noun. This meaning will be treated as the "Prototype" meaning around which other meanings of denominal adjectives are arranged. Members in the group resemble the "Prototype" since they all have the common semantic feature : "related to N". This analysis will help us to provide the common ground needed for the denominal adjectives and at the same time it will help us avoid the problem resulting from the claim that the range of denominal adjective meanings is limited, since the "Prototype" concept can accommodate infinite number of meanings around which they can be organized.

Moreover, the "Prototypical" account is consistent with our earlier analysis when we discussed the various types of Arabic adjectives differentiating between what is central "Prototypical" (Simple Adjectives) and what is peripheral (Participial and denominal). That is, the "Prototypical" analysis of the denominal meaning is not only introduced to solve this specific problem and account for the denominal meanings but also to account for the various types of Arabic adjective : Simple, Participial and denominal.

Furthermore, a correlation is borne in mind between prototypical adjectives (Simple) and the "qualitative" meaning, on one hand, and peripheral adjectives (denominal) and their "related to N" meaning, on the other. "Qualitative" meaning belongs mainly to central adjectives (Simple) as opposed to the "related to N" meaning which lies in the periphery and associates with peripheral members (denominal adjectives)³. Therefore, it will be claimed that the marginality of the meaning of "quality" to the meaning of the denominal adjectives correlates with morphological and syntactic factors and provides a clear evidence supporting our claim. In so doing we will divide denominal adjectives into "predicating" vs "nonpredicating" and we will note that the two are different from each other. Although we will concentrate on the latter type, we will argue that the former, unlike the latter, can share some important characteristics with Simple (qualitative) adjectives. Investigation of the latter type reveals that they share some important characteristics with nouns, since they do not occur predicatively, do not nominalize, do not occur in a gradable scale, do have agentive, objective case relations.

Finally, we will divide the Arabic denominal base into concrete vs abstract and note that those derived from the former are not predictable whereas those derived from abstract base with corresponding quadrilateral action nouns are predictable. This finding, which derives directly from our data is new in Arabic linguistics⁴.

6.1.1 Levi (1978) :

Levi studies the semantic and syntactic properties of 'complex nominals' (CN) in order to find the similarities between what she calls 'nonpredicating adjectives' and noun-noun compounds such as those in (i-iii) :

- i. Nominal Compounds, head noun not a 'nominalization' :

apple cake

doghouse

windmill

- ii. Nominal Compounds, head noun a nominalization :
 dream analysis
 city planner
- iii. Nonpredicating adjective-noun combinations :
 electric clock
 musical criticism
 electrical outlet

It is the purpose of Levi's book "to explain the many other features that these expressions share which are not so apparent at first glance". Levi (1978 : 38-39) defines 'complex nominals' as follows :

"The term *complex nominal* thus refers to that syntactic construction dominated by an N node and composed (in its simplest form) of a head noun preceded by a modifier which is either another noun or a nominal adjective".

She claims that in 'complex nominals' (i-iii) the items such as *apple* , *dream* , and *musical* share some features. They all have "a head noun preceded by a modifying element which in some cases is a noun, in others what appears to be an adjective" (cf. 1978 : 2). What concerns us is the 'Nonpredicating' adjectives in (iii) such as *electric or musical* . This group of adjectives is the least explored (Levi 1978 : 2) although the adjectives alone have been identified as a distinct set in earlier studies where they were identified by different terms in different studies (see §6.4).

Much of Levi's study is devoted to showing that both Nonpredicating adjectives and 'Nominal Compounds' are derived from the same underlying sources by just one or two syntactic processes : the DELETION or the NOMINALIZATION of the predicate in the underlying S (Levi 1978 : 75-76). Levi postulates that these sources must⁵ contain one of the nine predicates listed below in contrast to Jespersen (1924 : 143-144) who maintains that their behaviour is almost entirely unsystematic, and in contrast to our claim in which we will show that such adjectives have only one general meaning : "related in some way to N". To quote,

"A careful examination of the semantic relationship between head nouns and prenominal modifiers in CN reveals not only that these relationships are not "endless in number" as Jespersen (1942) and others have asserted, but that the variety of these relationships is in fact confined within a very limited range of possibilities." (Levi 1978 : 75).

The purpose of Levi's study is "to specify **all** (emphasis not mine) possible meanings that a given "Compound Nominal" (CN) can have" (cf. Levi 1978 : 9). These possibilities are stated by Levi (1978 : 76) as follows :

CAUSE	(<i>tear gas, malarial mosquitoes</i>)
HAVE	(<i>picture book, musical comedy, gunboat</i>)
MAKE	(<i>honeybee, musical clock, songbird</i>)
USE	(<i>steam iron, solar genrator</i>)
BE	(<i>soldier ant, consonantal segment</i>)
IN	(<i>field mouse, marginal note</i>)
FOR	(<i>horse doctor, nasal mist</i>)
FROM	(<i>apple seed, solar energy</i>)
ABOUT	(<i>abortion vote, linguistic lecture</i>)

According to Levi, these predicates are deleted in the course of derivation. To quote,

"The fundamental claim of this chapter is that the larger part of the semantic relationships that may be associated grammatically with the surface structures of CN can be expressed by a small set of specifiable predicates that are recoverably deletable in the process of CN formation" (cf. Levi 1978 : 75).

However, predicating adjectives, unlike nonpredicating ones, are not subject to the same deletion, but represent a combination of a transparent nominal element (the stem) and an opaque predicate element (the suffix). Consequently, *dusty* in *dusty shelves* , for example, is predicating since its suffix represents a predicate which is IN. On the other hand, *pictorial* in *pictorial atlas* is nonpredicating since its suffix is semantically empty and therefore, does not represent a predicate (its predicate, IN, has been deleted).

Thus the derivation of *picture book* and *musical comedy* is similar, since they both involve predicate deletion, except for the late optional 'adjectivalization' rule which only the latter is subject to. On the other hand examples like *wealthy man*, by means of 'incorporation' represent a combination of wealth+having. This explains, according to Levi, why it is predicating (see our distinction between predicating and nonpredicating in §6.5).

Similarly, according to Levi (1978 : 79), in *musical comedy* the adjective *musical* is Nonpredicating adjective since its suffix is semantically empty and does not represent a predicate (its predicate HAVE has been deleted in the course of derivation : *music having comedy* which undergoes predicate deletion to give *musical comedy*) But *wealthy man* which has the same predicate, namely HAVE, is predicating since its suffix represents undeleted predicate.

6.1.2 Critique of Levi's Account :

1. Levi's argument cannot be accepted since it lacks predictive power, i.e. she does not specify what factor(s) trigger off predicate deletion as opposed to incorporation. Levi's theory claims that the derivation of predicating adjectives involves predicate incorporation, as opposed to the derivation of nonpredicating adjectives which involves predicate deletion. Although we can accept the fact that the two kinds of adjectives are different, we cannot accept Levi's theory.

2. The semantic structure proposed by Levi as an underlying for 'Complex Nominals' makes flatly false claims about their meanings (cf. Newmeyer (1979 : 398). For instance, Levi derives *polar bear* from 'bear that uses the pole', 'bear at the pole'. Similarly she derives *tear gas* from 'gas which tears cause', 'gas from tears', 'gas for tears' etc. But as correctly noticed by Newmeyer (1979 : 399) *tear gas* does not mean any one of these things. To quote,

"If it has a paraphrasable meaning **at all** (emphasis mine), it is gas so-called because one of its properties is to cause tears' [...]"

Levi appears to be in the position (particularly awkward for a generative semanticist) of deriving surface structures from logical structures which do not represent their meaning." (cf. Newmeyer 1979 : 399-400).

To solve the problem related to meaning Levi claims that given a Complex Nominal the native speaker will assign to it any of her nine predicates. It follows that when the native speaker is given a Complex Nominal such as *closet ape* ⁶, for example, he/she would hypothesize a meaning like 'ape who makes closet', 'ape in a closet', 'ape from a closet', etc. , but not 'ape who hates closets', 'ape under a closet', 'ape borne in a closet'. Thus, in this respect, Newmeyer's remark complements our position in which we emphasize that the only possible meaning for such adjectives (Nonpredicating) is "related some how to N".

6.1.3 Ljung (1970) :

Ljung (1970) studies the denominal adjectives in English in order to describe the semantic factors that govern the productiveness of certain type of word-formation in English, i.e. the formation of adjectives from nominal stems (cf. 1970 : 7). He is interested "primarily, in what different meanings can be expressed by means of denominal adjectivalization" (cf. 1970 : 18). His basic material is taken from the 8000 words in Thoren (1959) which were segmented into morphemes, and then computerized in order to obtain a frequency list of the different denominal suffixes. The 218 different denominal adjectives considered by Ljung have different suffixes; the most frequent, according to Ljung, are -y (59), -al (44), -ful (37), -ous (34), -ly (16), -ic (16), and -ish (14) (cf. Ljung 1970 : 17). Other less frequent suffixes are excluded since Ljung studies only those adjectives with high frequency⁷. To quote,

"Assuming that there must be considerable correlation between the frequency of a suffix and its productivity, we have decided to investigate only the distribution of high-frequency suffixes. Let us define "high-frequency suffix" quite arbitrary as a suffix which occurs with ten or more different stem types in our corpus" (Ljung 1970 : 16).

To decide the meanings of the adjectives ending in these suffixes Ljung uses two dictionaries : *Webster' Seventh New Collegiate Dictionary* and *Webster's Third New International Dictionary*. Ljung (1970 : 23) found that many of the definitions of denominal adjectives are written in proposition form, i.e. typically they contain a predicate verb and its complement. This complement is normally identical to the stem of the defined adjective. Thus, for example, *snowy* would be defined as 'full of snow'. Ljung also observes that some definitions contain synonymous predicates, e.g. *stony* can be defined as 'abounding in/with stones', 'full of stones', 'filled with stones', 'having stones' etc. Ljung postulates 26 different "gross definitions" around which the adjective meanings "clustered into groups having the same or partly the same basic meaning". To quote,

"In the course of our work, we have found that the definitions applying to individual adjectives (i.e. the meanings found to be expressed by the individual adjectives) clustered into groups having the same or partly the same basic meaning. Those groups were called gross definitions. All in all twenty-six such gross definitions were set up" (cf. Ljung 1970 : 186).

Thus according to Ljung there are 26 different 'gross definitions' for the English denominal adjectives as listed below followed by a typical member of each group :

AFFECTED BY	<i>chilly</i>	FEELING	<i>envious</i>
AFFECTED WITH	<i>furious</i>	GIVEN TO	<i>thrifty</i>
APPEALING TO	<i>emotional</i>	IN ACCORDANCE WITH	<i>constitutional</i>
BEING	<i>dangerous</i>	HAVING	<i>curly</i>
BEING IN	<i>shadowy</i>	LIKING	<i>musical</i>
BEFITTING	<i>friendly</i>	MOTIVATED BY	<i>malicious</i>
BRINGING	<i>rainy</i>	ORIGIN	<i>intellectual</i>
CAUSING	<i>awful</i>	PERIOD OF TIME	<i>daily</i>
CHARACTERIZED BY	<i>wealthy</i>	POINT OF TIME	<i>monthly</i>
COMPOSED OF	<i>snowy</i>	PRODUCING	<i>noisy</i>
CONSTITUTING	<i>basic</i>	RELATING TO	<i>financial</i>
DERIVED FROM	<i>carbonic</i>	RESEMBLING	<i>sheepish</i>
DESERVING	<i>glorious</i>	SHOWING	<i>hungry</i>

Table (1)

The criteria Ljung used to decide adjectives belonging to these classes are primarily syntactic. To quote,

"It will be remembered that, by using certain criteria like the ability to occupy the predicative position, to be preceded by an adverb like very or quite, to permit gemination and to permit coordination with other adjectives, we found it possible to establish a difference between forms that were "real" adjectives and adjective-like forms which could in reality be regarded as the first elements in compounds" (cf. 1970 : 187).

Ljung excludes seven of the 'gross definitions' listed above in Table (1) since he found that they contain meaning typically expressed by compounds : BEING IN, COMPOSED OF, DERIVED FROM, ORIGIN, PERIOD OF TIME, POINT OF TIME, RELATING TO. Ljung (1970 : 187) remarks that "these definitions are distributed over adjectives formed from seven types of noun-stems". Subtracting the 19 'gross definitions' and including some as subtypes of others, particularly under the definition of HAVING, Ljung reduced the number of denominal adjective definitions to seven : CAUSING, DESERVING, CONSTITUTING, GIVEN TO, IN ACCORDANCE WITH, HAVING, RESEMBLING. Ljung claims that this reduction is based on frequency and productivity.

To quote,

"After all, we have found that the production of adjectives with certain meanings is much more productive than adjectivalization with certain other meanings, and we found that such distinctions could in many cases be backed up with evidence from dictionaries and native speakers" (cf. 1970 : 189).

This can be represented in the following Table :

Unproductive	CAUSING
	DESERVING
Mildly Productive	CONSTITUTING
	GIVEN TO
	IN ACCORDANCE WITH
Fully Productive	HAVING
	RESEMBLING

Table (2)

Thus according to Ljung, the English denominal adjectives can have seven different meanings of which the most frequent and productive are HAVING and RESEMBLING, the former includes adjectivalization from stems denoting concrete nouns (with the exception of human nouns) or abstract mass nouns, and the latter includes adjectivalizations from all stems which are concrete. But even definitions like HAVING vary in their meanings as Ljung himself admits :

"HAVING includes many different meanings which vary with the semantic nature of the stems in the denominal adjectives and sometimes also with the nature of the noun heads modified by the adjective in question" (cf. 1970 :191).

6.1.4 Critique of Ljung's Account :

1. Ljung's definitory meanings are inconsistent and unsystematic. As an example we will consider the denominal adjective *snowy* which is defined by Ljung (1970 : 67, and in Table III.I : 214) as 'whitened by' simply because this definition is found in *Webster's Seventh New Collegiate Dictionary*. Therefore, Ljung includes this definition which can only be derived from concrete mass nouns which denotes something white such as *floury*, *frosty*. Since this kind of treatment is very extensive in Ljung's study one would expect that it is reasonable to have other definitions involving other colours similar to 'whitened by' such as 'reddened by' for the denominal adjective *bloody*, for example. One would also expect to find definitions such as 'blackened by' for denominal adjectives such as *inky* or *cloudy*. However, since the dictionaries Ljung consulted do not contain such definitions, he does not include them. In Table III.I (page 214), Ljung includes the definitions 'stained with', 'made of' and 'smeared with' for the denominal adjective *bloody*; and 'relating to' and 'resembling' for the denominal adjective *cloudy*. Consequently, one may incorrectly conclude, on the basis of Ljung's analysis, that denominal adjectives derived from concrete mass nouns denoting something white have certain definition different from nouns denoting something red or black. This kind of inconsistency is created by the use of unsystematic dictionary meanings, which shows the problem of trying to limit the number of meanings (gross definitions) for denominal adjectives. This is explicitly stated by Givon (1970) who used the same dictionaries Ljung used. To quote,

"When one peruses the English dictionary, one is struck by the fact that the lexical category ADJECTIVE has a large and potentially boundless membership".

2. Although it is impossible to limit the meanings of denominal adjectives, Ljung postulates seven 'gross definitions' to account for the denominal adjective meanings in English. One of the major objections to Ljung is that in a particular combination of a denominal adjective and a noun there is no proof regarding the selection of one of the 'gross definition' meaning rather than the other. For example, in *bloody sword* it cannot

be said that the corresponding definition is 'smeared with blood' rather than 'stained with blood'. Therefore, the selection of one of the 'gross definition' rather than the other is arbitrary. For this reason Kastovsky (1974 : 18) observes that :

"Therefore, the meaning of a transpositional adjective can only be described in connection with the noun head it determines, because it is only in conjunction with its noun head that one can establish its syntactic-semantic function."

Similarly Szymanek (1987 : 209) studies denominal adjectives in Polish and notices that :

"Partly due to this fact most denominal adjectives are semantically ambiguous or rather **indeterminate** (emphasis mine). The meaning of any such adjective can be fully specified only with reference to its context, and in particular to its head noun." (cf. Szymanek 1987 : 209)

The problem is extended by examples like *oily liquid* which can be defined as 'a liquid that contains oil' or 'a liquid that resembles oil'. Notice the difference in meaning between the two definitions of the same combination which suggests that the context is sometimes important in deciding the meaning of denominal adjectives contrary to the claim made by Ljung. Therefore, Post (1986 : 17) notices that for the denominal adjectives :

"in fact the number of senses is endless because their meaning is context dependent, and the number of contexts possible for denominal adjectives is in principle infinite"

We will return to this point when we discuss Post's views.

3 . The scope of Ljung's study has been severely limited. Although he finds many different denominal suffixes, he decides to study only seven of them which occur more than ten times. This limitation seems to be arbitrary when we consider Marchand (1969 : 524-525) list of 25 different suffixes forming the denominal adjectives.

4 . Ljung's correlation between high frequency of suffixes and productivity is not without problems since high frequency is a token-frequency as opposed to productivity which is a type-frequency. This is not to deny such correlation but to show that it cannot be

based solely on frequency. Ljung seems to judge productivity entirely on frequency, although there are other factors that can affect productivity directly which he did not consider. Productivity can be explained, for example, synchronically and diachronically since "we cannot sensibly talk about the productivity of a morphological process without implicitly talking about the time" (cf. Bauer 1988 : 61). This is because what seems to be unproductive in the 1990's, for example, may have been productive before, such as the English suffix *-th* which was productive in the sixteenth century (cf. Bauer 1988 : 61). We can also explain productivity in terms of analyzability since all productive morphs are also analyzable, but not all analyzable ones are necessarily productive (Bauer 1988 : 61).

6.1.5 Warren (1984) :

Warren (1984 : 21) postulates 15 different relations, calling them "connecting links", between adjective-noun combinations which are meant to be general paraphrase corresponding to what is called by Levi "predicate" or "gross definition", as called by Ljung. Unlike Levi, Warren warns the reader from the beginning that definitions postulated are just paraphrases of the possible relations admitting that "normally more than one paraphrase is possible" (cf. Warren 1984 : 23). There are 15 different "connecting links" which have corresponding "Role Combinations", however, we will represent only the connecting links because they are comparable to Levi's and Ljung's as shown below⁸.

Connecting Link	Example
constituted by	criminal case
constituting	criminal assault
in accordance with	conventional methods
resembling	Roman nose
belonging	vocal tone
having	rational creature
occurring in/on	celestial bodies
containing	magnetic field
deriving from	domestic sewage

occurring in/at	nocturnal illumination
during which ...	nuclear age
dealing with	medical officer
caused by	electric shock
causing	pathetic boy
be for	athletic equipment

Warren claims that the above 15 definitions are the approximate relations between the combination adjective-noun, rather than the exact ones, or in Warren's own words "it has not been my main ambition to make my analysis as delicate as possible. Approximate ideas of the semantic structures of adjectives serve my present purposes" (cf. 1984 : 27). This shows that Warren is fully aware of Levi's problems of predicting such semantic relations. Therefore Warren's account, although vague, is superior to Levi's.

6.1.6 Post (1986) and Others :

Post maintains that the specific meanings of denominal adjectives are not static but vary from context to context. Therefore, it is plausible to ask whether they have a semantic context they share. The common feature that they have is that they modify a head noun relating it to the base noun. They show that a relationship exists between pairs of "objects" named by the head noun and the base noun. Post (1986 : 22) writes :

"According to our theory, a complete list of meanings rendered by denominal adjectives should in principle be unattainable."

Since Levi's nine predicates resulted from reduction of more specific ones, the ultimate point in the reduction would be "X is related to Y". Post's proposal, on the other hand does not result from any reduction but reflects that all denominal adjectives modify their head nouns. Therefore, the "X is related to Y" meaning would be valid for the derivation of denominal adjectives, which is limited to one specific meaning with a specific head noun.

Consequently the denominal adjective morphological structure would provide a very general meaning rather than a specific one.

Similarly Booij (1979) argues, on the basis of Dutch and English examples, that the semantics of complex words, such as denominal adjectives, is not determined by their morphology, but rather by the context, or, in Booij's own words,

"It will be shown that in some cases the interpretation of a complex word is not completely determined by its morphological structure, but is the result of an interaction between linguistic structure and non-linguistic information."

Downing (1977) who conducts a number of experimental tasks on the N + N compounds in English shows that, although the meaning relations postulated in Levi's are rather frequent in compounds, they do not exhaust the list of possible meaning relations. Thus, for instance, a *toe web* means, for some native speakers, as "web between toes", a *cowtree* as a "tree that cows like to rub up against" and an *eggbird* as a "bird that steals other birds' eggs". Therefore Downing (1977) writes that :

"The results indicate that the semantic relationship that hold between the members of these compounds cannot be characterized in terms of a finite list of 'appropriate compounding relationships'.

The generality of the denominal adjective semantic classes proposed by various linguists undoubtedly derives from the desire to limit the number of these classes required to account for all the types of occurring adjectives. But these analyses also presupposed that such semantic classes will not be used for underlying relationships whose essential semantic content is inexpressible. For example, Zimmer (1972 : 8-9) states that :

"Not, as John Ross has pointed out, can the relation 'A is between two B's' underlie a compound; *house tree* cannot mean 'tree standing between two houses'".

Lee (1960) and Levi (1978) propose deletable underlying structures, without

considering in detail the extent to which their underlying structures are to account for that portion of the semantic content of the resultant constituent which is not derivable from the meaning of the constituents themselves. For instance, Levi defines *oil bowl* as 'bowl FOR oil'. However, it is not clear how much of the essential content of the item is lost by reducing it to such formulae. Moreover, if the underlying structure of Nonpredicating adjectives is to be semantically bare as in Levi's, it is hard to account for the difference in meaning between distinct yet related interpretations for a given sequence.

The semantic indeterminacy can be observed in NPs having denominal adjectives. Such NPs show two possible interpretations. The first type is that the properties expressed by the adjectives are properties of the "referent" of the head noun of the NP. For example, in *muhanddisun jaa?icun* "a hungry engineer" the referent head *muhanddisun* "engineer" is described as *jaa?ic* "hungry" which means "an engineer who is hungry". This use of adjectives is called referent-modification (cf. Bolinger 1967). It also corresponds to what Warren (1984 : 90) calls descriptive adjectives. The second type is exemplified by *muhanddisun kiimaa?-iyy* "chemical engineer" which means "an engineer who occupies himself with chemical processes", rather than one "who is chemical. In such an example the adjective modifies one of the meaning aspects of the head noun *muhanddis* "engineer". Another similar example is a "rural police" which means "a police who exerts his function in a rural area" rather than a "police who is rural". In such an example the function of being a policeman is modified. This is called by Bolinger (1967) reference-modifying use of adjectives. It also corresponds to what is called by Warren (1984 : 91) as characterizing adjectives. The distinction between the two types also shows that predicating adjectives are referent-modifying as opposed to nonpredicating adjectives which are reference-modifying (see §6.5, below). In Chapter VII when we discuss the order of adjectives, we will see how important these classifications are in deciding the order of cooccurring adjectives (see §7.2.4). It will be shown that nonpredicating adjectives generally occur next to the head noun whereas other types of adjectives occur further away from the head noun following the former.

Whether both interpretations are possible depends on the adjective and the noun. For

example, the property of being *kiimaa?-iyy* "chemical" can only apply to non-animate entities. Therefore, such an adjective can only be interpreted as reference-modifying, i.e. modification of the function of the *muhanddisun* "engineer", whereas the adjective *jaa?ic* "hungry" cannot be interpreted as a modification of the function of the *muhanddisun* "engineer". Thus, given a NP in which an A modifies the reference of the head N which expresses a function, such an adjective is interpreted as *modifying somehow the function expressed by the noun*. Notice that this statement does not predict the exact semantic interpretation of the NP since the nature of the *somehow* is not determined.

6.2 A Prototype Account :

According to the prototype approach, the most stable part of the meaning of a word is the prototype, which is more common among the language speakers. In the prototype theory, it is maintained that a category has internal structure and fuzzy edges (Rosch 1973). Categories are also described as being coded in cognition in terms of prototypes of the most representative members of the category with various members of this category being organized around. The prototypical category is characterized by its structural stability and flexible adaptability. These two features can accommodate the marginally deviant concepts by bringing them into existence as peripheral members of the relevant category, maintaining the overall structure of the category itself. Thus we can postulate the prototypical meaning of denominal adjectives, which can be shared by the language speakers as "related somehow to what is denoted by the base noun of the adjective". This can be represented as follows :

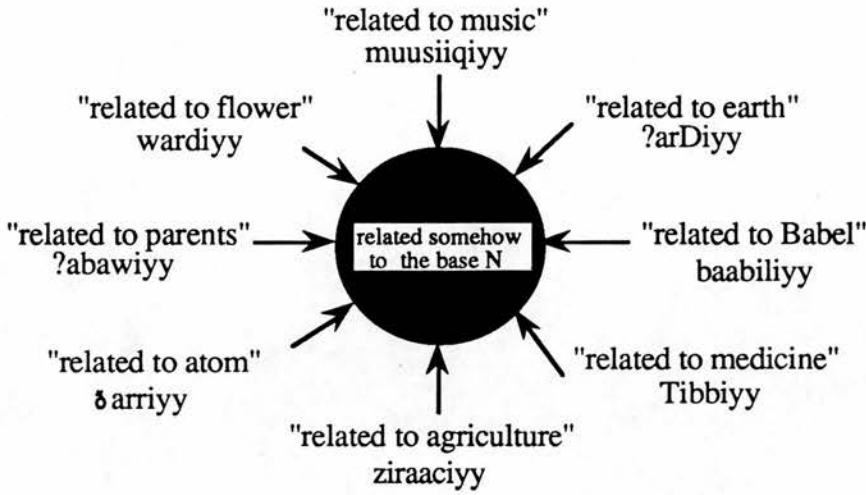


Figure (1)

The above diagram shows the general meaning of denominal adjectives when considered in isolation. However, when used in NPs they are associated with a more specific meaning. For instance the denominal adjective *muusiiq-iyy* "musical" would have more specific meanings in different NPs which are related *somehow* to the prototype as shown below :

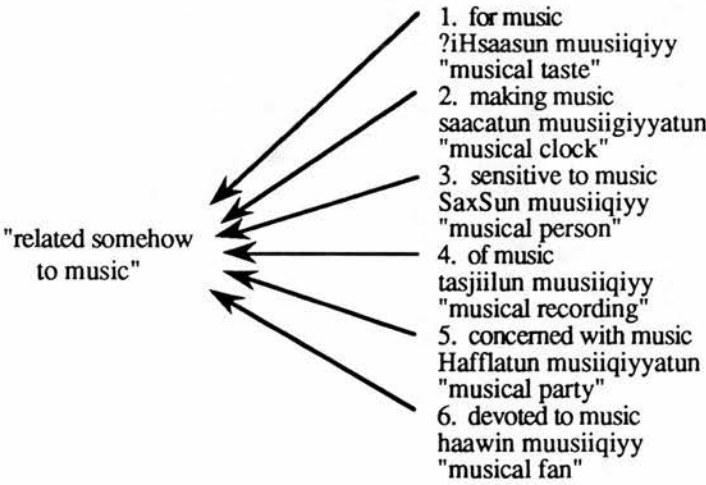


Figure (2)

It is generally believed that lexical items constitute natural categories of meanings forming a chain, with each meaning ultimately connected with a prototypical meaning (for more on prototype theory see §2.1). Members of a category can function as representative

themselves. Therefore, the general meaning of the denominal adjective *musical*, for example, can be interpreted as "related somehow to what is denoted by the base noun" while it constitutes a subprototype with its own extensions such as those in (1-7). Thus, for example, the denominal adjectives *barr-iyy* "terrestrial", *xaʃab-iyy* "wooden", *ʕarr-iyy* "atomic", *muusiiq-iyy* "musical" share the same prototype meaning, and have their own extensions. Consequently, the prototype meaning will accommodate new members without changing the overall pattern. This is because it is open-ended at both levels, i.e. the general level and the subprototype level. In this way we can account for the fact that the denominal meaning is infinite.

It must be noted that there is a similarity and overlap between the semantic definitions given by various linguists. This is clearly shown in Table (3) below . This, if true, shows that these definitions are something less than arbitrary. Therefore, we would suggest that among the possible relationships for denominal adjectives such definitions are more probable than others. But it must be clear that we do not claim that such possible definitions would exhaust the possible meanings for Nonpredicating adjectives.

Various Possible Relations For Nonpredicating Adjectives

Levi	Ljung	Warren
CAUSE	CAUSING	CAUSING
HAVE	HAVING	HAVING
MAKE	? COMPOSED OF	----
USE	----	----
BE	BEING	? CONSTITUTED BY
IN	BEING IN	OCCURRING IN/ON
----	PERIOD OF TIME	OCCURRING IN/ON
----	POINT OF TIME	DURING WHICH
FOR	----	BE FOR
FROM	ORIGIN	DERIVING FROM
ABOUT	RELATING TO	? RESEMBLING

Table (3)

The above Table shows the following :

1. The definitions given by different linguists to the same adjectives are different which shows that such relations cannot be predictable nor can be limited. It also shows that what is considered by some linguists as minor class is sometime

considered by others as major.

2. The number of the postulated definitions differ from one linguist to another which also shows that they are neither predictable nor attainable.
3. There is an overlap between some of the definitions which shows that some of the definitions are possible but not always predictable nor are they the only possible ones. In other words the postulation of the above definitions are not 100 percent arbitrary.

The above three points show that the assumption that the connecting relation (definitions) between the adjective and its head is invariable is false. Indeed they show that the relations vary. The overlapping ones show that the corresponding predicates might be more probable than the others.

6.3.1 Denominal Adjectives in Polish :

Szymanek (1985 : 141-169) in his study of the denominal adjectives in Polish criticizes both Gawelko (1976 : 21) and Grzegorzczkova (1979) and notices (1985 : 143) that Gawelko distinguishes four semantically different classes of denominal adjectives : (1) the meaning of quality, (2) the meaning of similarity, (3) the meaning of substance (material) and (4) the meaning of relation. It is also noted by Szymanek (1985 : 147) that even the five classes plus the class of "general relational" denominal adjectives proposed by Grzegorzczkova are not sufficient. Szymanek (1985 : 149) explicitly states that :

"No matter whether we recognize four classes or five main classes plus a few additional an exhaustive division is unattainable, as it may be assumed that even the recognition of a hundred of semantic classes within those formations would not suffice."

Polish has six different 'relational' suffixes which render the relational function (cf. Szymanek (1985 : 151) :

Suffix	Noun	Gloss	Den Adj.
1. /j/	kobieta	"woman"	kobiecy
2. /œn/	ziemniak	'potato	ziemniaczany
3. /i/	ryba	'fish'	rybi
4. /in/	szkola	'school'	szkolny
5. /isk/	uniwersytet	'university'	uniwersytecki
6. /ov/	dom	'home'	domowy

Polish and English, unlike Arabic, have a problem regarding the 'relational' adjective suffixes since in both languages there is no formal criteria which would enable proper differentiation of the "qualitative" adjectives from the "relational" ones. The six Polish suffixes can all have a qualitative function. Thus there is no way to distinguish the two semantic functions (relational vs qualitative) (cf. Szymanek 1985 : 145-146).

Szymanek (1987 : 216) observes that denominal adjectives in Polish can be divided into Qualitative vs Relational, and logically there are four different possibilities as follows :

	Relational A.	Qualitative A.
1.	-	-
2.	-	+
3.	+	-
4.	+	+

He uses the following illustrative examples :

	Relational A.	Qualitative A.
1. aktorka "actress"	-	-
strona "page"		
2. wina "guilt"	-	winny
sok "juice"	-	soczysty
3. sklep "shop"	sklepowy	-
miasto "city"	miejski	-
4. kwas "acid"	kwasowy "of acid"	kwasny "sour"
cena "price"	cenowy "of price"	cenny "valuable"

Thus there are nouns which have neither Relational nor Qualitative corresponding forms (as in (1)), nouns having only corresponding Qualitative adjectives (as in (2)), nouns having only corresponding Relational adjectives (as in (3)), and nouns having corresponding Qualitative and Relational adjectives (as in (4)).

6.3.2 Denominal Adjectives in Russian :

Similarly in Russian Beard (1976 : 109) notices that "there are at least ten different suffixes which render the semantic content of Adj's (having X)". However, "there is no one-to-one correlation between the suffix categories and the semantic one [...] Not only is one semantic category reflected via several suffixes, but five of the suffix categories can express both semantic fields" i.e. 'qualitative' and 'relational'. Beard notices that there are many homonyms with these five suffixes in the language e.g. *ledjanoj* "icy", *vodjanistyj* "watery".

Therefore, there are multi-functional and co-functional formatives. Consequently, most denominal adjectives are semantically indeterminate as noted by Szymanek. To quote,

"It has been pointed out by many authors that the lexical meaning of many such transpositional adjectives is, by and large, indeterminate, and may only be paraphrased very generally as 'connected with/pertaining to what is denoted by the base noun'. Therefore, as has been mentioned, transpositional adjectives are also called 'generally relational', or 'relational'". (cf. Szymanek 1987 : 215).

6.3.3 The Qualitative/Relational Difference in Russian :

Russian qualitative adjectives, unlike relational, are generally gradable, have a Short Form when occurring predicatively and form derived nominals and adverbials (cf. Sussex 1974). The difference between the two corresponds to what we will call

Predicating/Nonpredicating. The following examples are illustrative :

- 5.a krasivaja kniga
beautiful book
- 5.b ocen' krasivaja kniga
very beautiful book
- 5.c eta kniga krasiva (-ja)
this book is beautiful
- 5.d krasota etoj knigi
the beauty of this book
- 5.e ona krasivo pela
she was singing beautifully

On the other hand, 'relational' adjectives *derevjannyj* "wooden" are not gradable, have no Short Form, are more restricted in their occurrence in predicates, and form no derived nominals or adverbials. They are typically denominal :

(Denominal)

- | | | |
|-----|-----------------|-----------------|
| 6.a | derevjannyj dom | dom iz dereva |
| | wooden house | house from wood |

(Deverbal)

- | | | |
|-----|---------------------------|---------------|
| 6.b | pokupatel'naja sposobnost | pokupat |
| | purchasing power | purchase, buy |

(Deadverbial)

- | | | |
|-----|-----------------------|----------|
| 6.c | segodnjaSnjaja gazeta | segodnja |
| | today's paper | today |

The above Russian examples show clearly the difference between relational and qualitative adjectives. However, some relational adjectives can acquire figurative meanings in metaphors and become like qualitative adjectives in many respects.

6.3.4 Arabic Denominal Adjectives :

In Arabic the situation is different since we have only two possibilities : either there are nouns which do or do not have corresponding *-iyy* adjectives as exemplified below :

Noun		Denominal	
7.a	sikkiin "knife"	-	
7.b	saacah "watch"	-	
7.c	baab "door"	-	
7.d	jabal "mountain"	jabal-iyy	"mountainous"
7.e	?arD "terain"	?arD-iyy	"terrestrial"
7.f	?idaarat "administration"	?idaar-iyy	"administrative"
7.g	fiDDat "silver"	fiDD-iyy	"silvery"
7.h	ðarrat "atom"	ðarr-iyy	"atomic"

This is because of two reasons. Firstly, predicating adjectives in Arabic correlate with verbs rather than with nouns. Secondly, only nonpredicating adjectives have systematically corresponding nouns from which they are derived. However, the situation is complicated by the fact that some of the *-iyy* adjectives have a "Qualitative" meaning and show normal characteristics of "Qualitative" adjectives.

Thus Arabic has one single suffix, namely *-iyy*, which mainly has a 'relational' meaning. This is not to deny the qualitative meaning the suffix can have, for example, the adjectives *Daruur-iyy* "necessary" and *?arD-iyy* "terrestrial" both take the suffix *-iyy*, however, the former is Qualitative since it has many of the characteristic features for Simple adjectives whereas the latter is Relational since it cannot occur predicatively nor can it be modified by intensifiers. Thus, while in other languages such as Polish and Russian there are multiple suffixes with multiple semantic functions in Arabic we have a single suffix with multiple meaning. Therefore, the rules deriving such asymmetrical adjectives, in Polish and Russian, determine their meaning but not suffixation, and must be located in the lexicon (cf. Beard (176 : 111). On the contrary, the rule deriving Arabic denominal

adjectives can specify the suffix. However, whether a form taking the suffix *-iyy* is Relational or Qualitative is not predictable, from the form of the relevant item. Therefore, other facts must be taken into account in order to distinguish between the different types of the *-iyy* adjectives in Arabic (i.e. between the predicating and the nonpredicating). This will be discussed in a separate section (§6.5).

6.4 The Background of Denominal Adjectives :

There are quite a number of terms used to describe the same type of adjective. This group of adjectives is the least explored as noticed by Levi (1978 : 2) although the adjectives alone have been identified as a distinct set in earlier studies where they were called differently. The term 'Denominal' is some times used to cover two types of adjectives : those that can occur predicatively as opposed to those which cannot. In what follows we will review the term(s) used to identify denominal adjectives in the Arabic and English literature.

6.4.1. The Term Denominal in Arabic

In Arabic a distinction is always made between the adjectives that take the suffix *-iyy* which are called "relational" and those which do not. However, the distinction between the *-iyy* adjectives that can occur predicatively vs those which cannot is not clear⁹. There are some linguists who note the behaviour of denominal adjectives and identify them as such in the Arabic literature. Sibawayhi (died 793) in his book *Al-kitaab* "The Book" (Vol II : 69) calls such forms *nisbah* "relation"¹⁰. Ibn Maalik (died 1274) in his book *Al-Alfiyyah* (page 795) gives some phonological rules for the stem changes after the suffixation of *-iyy*. He, like Sibawayhi, uses the term *nisbah* "relation" to refer to the semantic content of such forms. Hasan (1976 Vol IV : 713) calls the denominal suffix *-iyy* (*yaaʔ* ?*an-nasab*) "the suffix of relation" which indicates something is related to the relevant noun, or, in his own words, "related to it in a relation such as kinship, friendship, origin, make,

etc.". He observes that it can be attached to a singular noun which he calls (Al-mansuub ?ilayhi) "what is related to", and he calls "the thing that it indicates" (Al-mansuub) "the relation". Therefore, denominal adjectives indicate two things : Al-mansuub and Al-mansuub ?ilayhi. Carter (1981 : 259) notices that 'nisbah' literally means "relation of blood, extended thence to logical and other relationships. "originally suffixed only to proper names, it was soon generalized". Wright (1896 Vol I : 149) remarks that :

"The **relative** (emphasis mine) adjectives, (Al-?asmaa? Al-mansubah) or simply Al-nisbaat 'relations', are formed by adding the termination -iyy to the words from which they are derived, and denote that a person or thing belongs to or is connected therewith (in respect of origin, family, birth, sect, trade, etc.)".

With respect to Syrian Arabic Cowell (1964 : 180-182) remarks that :

"A **relative** (emphasis mine) adjective indicates something characteristic of, having to do with, what the underlying word designates. Most adjectives are formed by suffixing -i or sometimes -aani to a noun base; a few are derived from words other than nouns"

Thus a term corresponding to English "relational" exists in Arabic almost 12 centuries ago. The Arab linguists seem to describe the "relational" adjective in terms of its relation to the base noun as well as the modified head noun. Moreover, the Arab linguists do not attempt to suggest certain limited number of meanings for such type of adjectives. However, a discussion of the predictability of deriving a denominal adjective from a corresponding base is absent from the literature on Arabic denominal adjectives.

6.4.2 The Term Denominal in English :

In English the term "denominal" is used to refer to a group of adjectives that can have some suffixes. There are many studies which refer to the type of denominal adjectives which do not occur predicatively. Such adjectives have been identified as a distinct kind in earlier studies, and variously called "pseudoadjectives" by Postal (1969), "transpositional" or non-copula adjectives" by Marchand (1966), "attributive-only adjectives" by Bolinger

(1967), "denominal adjectives" by Ljung (1970) and Coats (1971), and "denominal non-predicating adjectives" by Levi (1973 and 1978). Arts and Calbert (1979) call them the first elements of linking constructions.

Nonpredicating adjectives have some peculiar characteristics. They do not occur predicatively, since they merely transpose the complement of the verb (*polar* transposes *pole*) (cf. Marchand 1966 : 134 who distinguishes between what he calls 'transpositional' vs 'semantic' adjectives which corresponds to Nonpredicating/Predicating in Levi's). Semantically they have, in principle, an unlimited number of meanings which can only be restricted by reference to the modified head noun. Therefore, Levi (1978 : 4) suggests that they, like 'Nominal Compounds', are derived from underlying nouns. Levi distinguishes this group of adjectives (Nonpredicating) from other 'denominal' adjectives such as *wealthy*, *childish*, *heroic*, *poisonous* etc. which can occur predicatively, may be modified by intensifiers such as *very* and can have other characteristics of normal adjectives (therefore, they are called Predicating)¹¹.

6.5 Evidence For The Predicating/Nonpredicating Difference:

There are striking similarities between Nonpredicating adjectives (reference-modifying) and nominal compounds. Although we are not concerned with nominal compounds, we will show the similarities between denominal adjectives, i.e. nonpredicating, and nouns. These similar characteristics between nonpredicating adjectives and nouns are useful tests in distinguishing between Predicating and Nonpredicating adjectives. Although these characteristics show that A+N is similar to N+N, it does not follow that we accept Levi's transformational theory for the reasons stated above in ((1) 'Levi's critique'). It will be argued that nonpredicating adjectives are not gradable, do not accept modification by intensifiers such as *jiddan* "very", generally do not occur predicatively and do not nominalize. These criterial features provide clear evidence as to the nominal status of nonpredicating denominal adjectives.

6.5.1 Nonpredicating Adjectives And Gradability :

In this section we will argue that Nonpredicating adjectives are not generally gradable, therefore, they do not accept modification by intensifiers such as *jiddan* "very". This is noted by some linguists such as Levi (1978 : 19) and Lees (1960 : 180-181). Lees, for instance observes that "bona fide" adjectives can be systematically distinguished from Nonpredicating ones by the criterion of accepting intensifiers such as *very*. Other linguists such as Quirk et al (1985 : 404), Huddleston (1984 : 303), Brown and Miller (1990 :236) and Dekeyser (1979 : 218) used the modification by intensifiers and comparison as criterial features for central adjectives¹². Thus while Nonpredicating adjectives do not accept intensifiers central adjectives do which constitute an important difference between the two types¹³.

Some important related semantic facts which further refine the difference between predicating and non-predicating adjectives are brought out by Bartning (1976 : 78ff) in her analysis of denominal adjectives in French¹⁴. Exploiting the three-way distinction between (1) 'binary oppositions' which admit no degree between the two opposites (e.g. *SaH* "true" *xaTa?* "false") which come in pairs and between them exhaust all the relevant possibilities (cf. Hurford 1983 : 114)); (2) 'multiple oppositions', which usually are not gradable but which comprise more than two alternatives in a given area (e.g. colour words); and (3) polar oppositions, in which two poles define an entire continuum (e.g. *ganiy* "rich" *faqiir* "poor"). Bartning notices that Predicating adjectives fall almost entirely into the first and third categories, as opposed to the vast majority of Nonpredicating adjectives which belong to the second category. Furthermore, while very few Nonpredicating adjectives set up binary opposites (*Tabiic-iyy* vs *kiima?-iyy* "natural/chemical", *xuraaf-iyy* vs *maad-iyy* "superstitious/materialistic"), there exist no instances where these adjectives show a polar opposition¹⁵. Huddleston (1984 : 303) observes the difference between gradable and ungradable adjectives and states that :

"From a semantic point of view, a gradable adjective denotes a scalar property as opposed to a categorial one - where a scalar property is one that can be possessed in varying degrees; and precisely because the property can be possessed in varying degrees the adjective can take degree modifiers."

Arabic examples corresponding to Bartning's 'multiple oppositions' among denominal adjectives can be seen in (9) as opposed to (8) in which the underlined adjectives are gradable and occur in the data followed by intensifiers such as *jiddan* "very". The examples in (10) show the most common of those few pairs whose denominal adjectives form binary oppositions.

- 8.a daxala rajul-un badiin-un jiddan
entered man-NOM fat-NOM very
"A very fat man entered". (K135)
- 8.b kaan-at ?um-ii ganiyy-at-un jiddan
was-she mother-my rich-F.-NOM very
"My mother was very rich". (G118)
- 8.c ?al-hawaa?-u Da?iil-un wa jaaf-un tamaaman
the-air-NOM little-NOM and dry-NOM very
"The air is decreasing and very dry." (H39)
- 8.d wa qaala ?anna-ha caziiz-at-un jiddan
and said verily-she dear-F.-NOM very
"And he said she is very dear." (G53)
- 9.a wa carafa ?al-majd-a ?al-?adab-iiy-a
and knows the-glory-ACC the-literary-DEN-ACC
"And he knows the literary glory". (C193)
- 9.b jasad-in ba?ar-iiy-in
body mankind-DEN-GEN
"A human body" (B105)
- 9.c tattabicu Turuq-an buuliis-iiy-at-in
follows ways-ACC police-DEN-GEN
"Follows police-like ways." (F20)
- 9.d cala mawqic-in Harb-iiy-in
on location-GEN war-DEN-GEN
"On a military location". (J252)
- 9.e fi gayri ?aZ-Zuruuf-i ?an-nafs-iiy-at-i
in neg. the-circumstances-GEN the-psychological
"in a different psychological circumstances." (J170)
- 10.a ?al-Hikaayat-u ?al-xuraaf-iiy-at-u
the-story-NOM the-superstition-DEN-F.-NOM
"The superstitious story" (H108)

- 10.b sa-yartadi ziya-hu ?ar-rasm-iiyy-a
 future-wear-he uniform-his the-form-DEN-ACC
 "He will wear his formal uniform". (D127)
- 10.c ?al-Hiwaar-u ?al-caad-iiyy-u
 the-debate-NOM norm-DEN-NOM
 "The normal debate (F12)
- 10.d maca mawqifi-ha ?al-cidaa?-iiyy-i
 with position-her the-agression-DEN-GEN
 "With her aggressive position". (E68)

The underlined elements in (8-10) are adjectives of different types. Those in (8) are central adjectives whereas those in (9-10) are denominal of different characteristics. On the basis of Bartning's observation, we may state that denominal adjectives, such as the underlined ones in (9), are not used to denote intensifiable qualities, i.e. qualities which correspond to points along a continuum, such as those in (8). But they serve to assign membership to discrete subsets; the number of subsets may be only two (as in the binary oppositions like *ʔakar* vs *?unθa* "masculine vs feminine") or some number greater than two (as in multiple oppositions such as that exemplified in *engineering* subfields : *chemical, sanitary, biomedical, structural, hydraulic* etc). Therefore, Levi (1978 : 21) correctly remarks that there is a complementary distribution of function between Nonpredicating and Predicating adjectives, namely that the latter are primarily used to assign places along a continuum and the former to assign membership in specific, discrete subsets of the larger category denoted by the head noun.

Warren (1984 : 85-103) divides English adjectives into descriptive, classifying and identifying and notes that the former is gradable. To quote,

"I suggest that the gradability of descriptive adjectives simply reflects our experience that certain qualities (redness, length, age, intelligence etc), states (hunger, anger, sadness), effects (noise, sensation, risk etc) and attributes (stones, dust, sweat, hair) may vary in intensity, amount or number."

6.5.2 Nonpredicating Adjectives And Case Relations :

Nonpredicating adjectives may be analyzed as entering into case relations such as agentive, objective, locative, possessive and instrument. It is a common practice to analyze nominal constituents in terms of semantically based case relation such as agent, patient, and instrument. Since such relations are usually applicable to nouns and noun phrases, according to my assumption such an analysis should be applicable to nonpredicating adjectives.

Furthermore, just as semantic analysis of noun phrases assign cases not on the basis of surface configuration (relevant only to syntactic case marking) but rather on the basis of the underlying propositions from which they are derived, so too the case relations of nonpredicating adjectives should be analyzed in terms of the propositions from which they are derived. The examples in (11) show that Nonpredicating adjectives expressing agentive, objective, instrumental etc.

- 11.a ?al-intaaju ?al-?adab-iyyu
 the-production the-literary
 "The literary production" (A7)
- 11.b bi muhimmati ?al-muSliH-i ?al-?ijtimaac-iy-y-i
 with duty the-reformer-GEN the-society-DEN-GEN
 "With the duty of the social reformer" (B109)
- 11.c wa qad taqaddam-at ?al-fataat-u fi diraasati-ha ?al-?anθrubuluj-iy-y-at-i
 advanced-She the-girl-NOM in study -her the-anthropological-F-GEN
 "The girl advanced in her anthropological study". (J130)
- 11.d fa ya?isa min ?ad-diraasat-i ?al-cilm-iy-y-at-i ?an-naZar-iy-y-at-i
 renounced from the-stud-GEN the-science-DEN-F.-GEN the-theory-DEN-F-GEN
 "He renounced the scientific and theoretical study". (J16)

The above examples provide further evidence as to the nominal origin of relational adjectives. The case relations of the underlined forms in (11.a) is agentive, in (11.b) and

(11.d) objective and in (11.c) possessive. Therefore, the system of case relations can be extended to include relational adjectives and also provide an explanation for such an extension in terms of the derivation of these adjectives.

6.5.3 Nonpredicating Adjectives In Contrasting Structures :

Nonpredicating Adjective, unlike Predicating, is acceptable in predicate position when it is used with a following one to which it can be contrasted. Thus the (a) examples in (12-13) are more acceptable than their corresponding (b) ones.

12.a ?al-qaraaru Hukuum-iyyun la jacb-iyyun

the-decision government-DEN neg. nation-DEN

"The decision is governmental, not national"

12.b *?al-qaraaru Hukuum-iyyun

the-decision government-DEN

"The decision is governmental".

13.a ?as-sanatu jams-iyyatun la qamar-iyyatun

the-year sun-DEN neg. moon-DEN

"lit. the year is suny, not moony (i.e. the year is counted in relation to the sun not the moon)"

13.b *?as-sanatu jams-iyyatun

the-year sun-DEN

"The year is suny".

14.a ?inna-hu ʕakiy-un jiddan

truly-he smart-NOM very

"Truly he is very smart".

(A50)

14.b *?inna-hu ʕakiy-un la gabiyyun

truly-he smart-NOM neg. stupid

"Truly he is smart, not stupid".

15.a ?albanaat kabiiraatun

the-girls big

"The girls are big

(B8)

15.b *?al-banaatu kabiiraatun la Sagiiratun

the girls big neg. small

"The girls are big not small".

16 *?al-qaraaru Hukuum-iyyun la Tayyib-un

the-decision government-DEN neg.

"The decision is governmental, not good"

The nonpredicating adjectives occurring in the (a) examples are acceptable in predicative position when they are contrasted to another similar adjective the presence of which seems to improve the meaning of the relevant examples. However, when such a contrast is absent as in the (b) examples, the nonpredicating adjective cannot occur in predicative position. In contrast to the nonpredicating adjectives in (12-13), the predicating ones in (14-15) show that they can occur in predicative position without the need for such contrasting adjectives as in the (a) examples in (14-15). Moreover, the presence of the contrasting adjectives in the (b) examples is less acceptable because we experience no sense at all that we must add a contrasting adjective in order to improve the meaning of the relevant examples; therefore, the (b) examples are asterisked. It is interesting to note that the adjectives in (b) in (12-13) require an adjective of the same type to follow the negative *la*. Thus another type of adjectives, such as Simple or Participial, cannot follow. Therefore, example (16), is asterisked. It is also interesting to note that one of our tests we employed to show the difference between adjectives and nouns (cf. §4.1.6) is the fact that only nouns can follow the negative *la*. This adds another reason as to the nonpredicating status of the adjectives in (12-13).

6.5.4 Nonpredicating Adjectives And Nominalization :

In this section we will show that while relational adjectives do not nominalize, nonrelational adjectives do. We will also correlate between nominalization and predicative occurrence. That is, nominalized adjectives are also predicative. If relational adjectives are derived from nouns, they would resist the process of nominalization which regularly applies to verbs and to non-relational adjectives. Therefore, in (17-19) the (a) examples are acceptable as opposed to the (b) examples when nominalized, modified by intensifiers or occur predicatively are not acceptable. Consider the following English examples :

17.a mechanical reaction

His reaction was (very) mechanical.

The mechanicalness of his reaction.

17.b a mechanical engineer

*The engineer is (very) mechanical

*the mechanicalness of the engineer.

18.a a nervous teacher

The teacher is (very) nervous.

The nervousness of the teacher

18.b a nervous disorder

*The disorder is nervous

*The nervousness of the disorder

19.a a marginal error

His error was (very) marginal.

The marginality of his error

19.b The marginal length (on a page)

*The length was (very) marginal.

*the marginality of the length

The above examples show that the ability of an adjective to be nominalized is correlated with its ability to occur in predicative position (cf. Levi 1978 : 30). Similarly Arabic Nonpredicating adjectives cannot be nominalized as evidenced by the following examples :

- 20.a niZaamin caSab-iiyyin
 system nerve-DEN-GEN
 "nervous system" (E81)
- 20.b *caSabiyy-atu ?an-niZaam-i
 "the nervousness of the system"
- 20.c *?an-niZaamu caSabiyyun jiddan
 "the system is very nervous".
- 21.a min ?at-takwiini ?al-cuDwiyy-i
 "from the organic existence" (F45)
- 21.b *cuDwiyy-atu ?at-takwiini
 "the organic of existence"
- 21.c *?at-takwiinu cuDwiyyun jiddan
 "the existence is very organic."
- 22.a min ?an-naaHiyati ?al-cilmiyy-at-i
 from the-side the-science-DEN-F-GEN
 "from the scientific side (point)" (K64)
- 22.b *cilmiyy-atu ?alnaaHiyati
 "the scientificity of the point."
- 22.c *?an-naaHiyatu cilmiyy-atun jiddan
 "the point is very scientific."
- 23.a ?al-caalam-u ?al-maa?-iyy-u
 the-world-NOM the-water-DEN-NOM
 "the watery world" (B86)
- 23.b *maa?iyy-atu ?alcaalami
 "The waterness of the world."

- 23.c *?al-caalamu maa?iyy-un jiddan
 "The world is very watery."
- 24.a li tusnida ?aqwa ?albuyuuti ?al-maal-iyy-at-i
 to help strongest the-houses the-money-DEN-F-GEN
 "to help the strongest monetary houses" (C181)
- 24.b *maaliyy-atu ?albuyuuti
 "the moneterity of the houses."
- 24.c *?albuyuutu maaliyy-atun jiddan
 "the houses are very monetary."
- 25.a bi faklin ?iijaab-iyy-in
 in manner harmony-DEN-GEN
 "in a harmonious manner" (E104)
- 25.b *?iijaabiyatu ?af-fakl-i
 "the harmonousness of the manner"
- 25.c *?af-fakl-u ?iijaabiyy-un jiddan
 "The manner is very harmonious."

The examples in (20-25) show that the underlined Nonpredicating adjectives have the following characteristics :

1. They take the suffix *-iyy* .
2. They cannot be nominalized. Therefore, the (b) examples are asterisked.
3. They cannot occur predicatively nor can they accept modification by intensifiers such as *jiddan* "very". Therefore, the (c) examples are unacceptable.

The examples in (20-25) contrast sharply with those in (26-30) in which the underlined adjectives are nominalized, occur predicatively and accept modification by intensifiers such as *jiddan* "very". Consider the following examples :

- 26.a wa jidaaru-hu ?abayD
 and walls-it white
 "And its walls are white" (E115)

- 26.b bayaaDu ?al-jidaari
"the whiteness of the walls."
- 27.a ?al-jawwu baaridun
the-weather cold
"The weather is cold". (G112)
- 27.b buruudatu ?al-jawwi
coldness the-weather
"the coldness of the weather."
- 28.a Rufaacat bari?-un
Rufaaca innocent
"Rufacat is innocent." (I277)
- 28.b baraa?at Rufaacat
innocence Rufaaca
"the innocence of Rufaacat."
- 29.a ?innaha ?ibnat-un taqiyy-at-un naqiyy-at-un
truely daugter-NOM devout-F-NOM pure-F-NOM
"Truely she is a devout and pure daughter." (D211)
- 29.b taqaa?u wa naqaa?u ?al-?ibnati
"the devoutness and purity of the daughter."
- 30.a ?inna haa?ulaa? ?an-naas Tayyib-uun
truely those the-people good-NOM Pl.
"Truely those people are good." (I452)
- 30.b Tiibatu ?an-naas
"the goodness of the people"

The underlined adjectives in (20-25) are nonpredicating whereas those in (26-30) are predicating. These are just few of the many examples found in the data which show the difference between Nonpredicating and Predicating adjectives in Arabic. The underlined adjectives in (26-30) belong to different patterns of Simple (cf. central) adjectives and show

some of their properties as such. Each adjective in the (a) examples occurs predicatively and can accept modification by intensifiers such as *jiddan* "very". The (b) examples show their corresponding nominalized occurrences which are acceptable. This clearly shows that Predicating adjectives, unlike Nonpredicating ones, can be nominalized. Levi (1978 : 30) suggests that there is no point in nominalizing what is nominal, therefore, Nonpredicating adjectives do not nominalize. To quote,

"In a sense, we might say there is simply no point (or meaning) in nominalizing an element which is already "nominal". As a consequence, although verbs and **predicating** (emphasis not mine) adjectives (in their role as sentence predicates) are perfect candidates for this transformation, nouns (when not serving as predicate nominals) and nominal adjectives are inherently unsuitable since in a sentence is that of logical argument rather than a predicate."

Thus, the ability of an adjective to be nominalized is predictable from its ability to appear in predicate position. That is, since Nonpredicating adjectives cannot occur predicatively, they cannot be nominalized. Whether a form would be nominalized or not is predictable in Arabic. This prediction is of twofold :

- i. Nominalization correlates strongly with Predicative occurrence.
- ii. Nominalization correlates strongly with morphological facts, i.e. the forms ending in the suffix *-iyy* generally do not nominalize.

Our data provide strong support for the above generalizations. The predicative vs attributive occurrences of the various types of adjectives is shown in Figure (3).

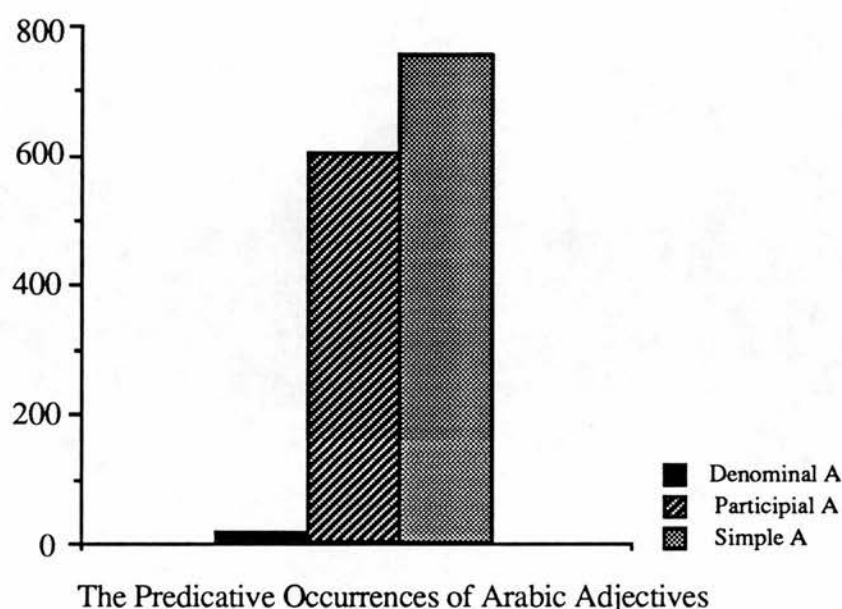


Figure (3)

The above Figure shows that predicative denominal adjectives are the least (17 examples), whereas predicative Simple and Participial adjectives are much more -753 and 603, respectively. That is, the percentage of predicative denominal adjectives is only 1.2 % as opposed to 55 % and 43.8 % for the predicative Simple and Participial adjectives, respectively. This clearly shows that although there are denominal adjectives occurring predicatively their association with this function is not as strong as that of Simple or Participial adjectives.

Although (i) is applicable to English (ii) is not. This is because Arabic denominal adjectives are morphologically predictable, i.e. have one suffix namely *-iyy*, whereas English denominal adjectives have many different suffixes¹⁶. However, the situation is not that easy because in Arabic there are some untypical adjectives which take the suffix *-iyy* and nominalize. Therefore, the generalization in (ii) does not apply to examples like (31) in which the adjectives both take the suffix *-iyy* and nominalize. The following examples are illustrative :

- 31.a Ali caSab-iyyun
"Ali is nervous"
- 31.b caSab-iyyatu Ali
"the nervousness of Ali"
- 31.c Ali caSab-iyyun jiddan
"Ali is very nervous."
- 32.a wa ?al-hawaa?-u Daruur-iyy-un jiddan
"And air is very necessary." (G47)
- 32.b Daruur-iyy-atu ?al-hawaa?-i
"the necessity of air"

Although the examples in (31-32) take the suffix *-iyy*, they, unlike those in (20-25), are nominalized. This shows that nominalization can apply to adjectives that take the suffix *-iyy*, therefore, the ungrammaticality of the (b) examples in (20-25) is not due to morphological reasons but rather to syntactic-semantic ones. Other similar examples which can be nominalized are as those in (33) below :

- 33.a rujuul-iyy-at ?almuHaaribi "manhood of the warrior"
- 33.b yahuud-iyy-at ?alqawmi "Judaism of the people"
- 33.c naSraan-iyy-at ?urubah "Christianity of Europe"

Wright (1896 Vol I : 165) observes that the denominal adjectives in Arabic can be nominalized. To quote,

"The feminine of the relative adjectives serves in Arabic as a noun to denote the abstract idea of the thing, as distinguished from the concrete thing itself; and also to represent the thing or things signified by the primitive noun as a whole or totality. It corresponds therefore to German substantives in *heit*, *keit*, *schaft*, *thum*, and to English ones in *head dom ty* etc."

Notice that, like the (b) examples in (20-25), the above ones, take the feminine suffix *-at*, i.e. cannot agree in gender with a M. modified head noun. However, such

nominalization does not contradict our generalization in (i) since the the adjectives that nominalize also occur predicatively (and accept modification by intensifiers). Consideration of the occurrences of denominal adjectives shows that they occur almost always in attributive position. This point is statistically correct, i.e. most of the adjectives that take the suffix *-iyy* occur attributively, as shown in Figure (3) above, and in Table (4) below. There are 1238 occurrences of such adjectives, only 17 occur in predicative position.

Attributive vs Predicative Adjectives				
	Simple Adj.	Participial Adj.	Denominal Adj.	Total
No. of Pred. Occurrences	753	603	17	1373
No. of Attrib. Occurrences	4167	2275	1221	7663
Percentage of Pred. Occurrences	8.33	6.67	0.19	15.19
Percentage of Attrib. Occurrences	46.12	25.18	13.51	84.81
Percentage of pred. out of Pred.	54.84	43.92	1.24	100
Total Occurrences	4920	2878	1238	9036

Table (4)

Although Table (4) shows that the predicative occurrence of Arabic adjectives is always less than the corresponding attributive for all types of adjectives, the predicative occurrence of denominal adjectives is the least. There are only 17 occurrences of predicative denominal adjectives in the whole data, which constitute (% 0.19) of all the occurrences of all adjectives, whereas there are 753 predicative Simple adjectives and 603 participial, which constitute % 8.33 and % 6.67 respectively. The same result is obtained when we consider the percentage of each type of predicative adjectives out of the total predicative occurrences. This shows that the percentage of the predicative denominal is the least (% 1.24) as opposed to Simple adjectives (% 54.84) and participial adjectives (% 43.92). This statistical evidence gives a strong support to our claim that such adjectives occur almost entirely in attributive position. Warren (1984 : 96) has a similar observation about English. Warren writes,

"Classifying adjectives occur primarily in attributive positions. Again, this is to be expected, since their function is the modification of the reference of the noun they determine, and not the formation of predication."

6.6.1 The Denominal Adjectives Base Form :

In this section I will discuss how predictable is the derivation of denominal adjectives. The denominal base to which the denominal suffix is attached will be divided into different types : concrete vs abstract with a third variable namely, having action noun or not. The general rule is that a denominal adjective can be derived from any **quadrilateral** action base noun. This generalization, which is not found in the literature, derives directly from our data. Therefore, any attempt to reduce the power of this statement would have to explain this consistency in our data.

It is also interesting to note that although the morphological criteria fails to distinguish between the two types of denominal adjectives (Nonpredicating/Predicating), it is useful in distinguishing between denominal adjectives, on the one hand, and Simple and Participial adjectives, on the other. Denominal adjectives are identified by the suffix *-iyy* in contrast to Simple and Participial adjectives which take different patterns. Moreover, while Simple and Participial adjectives have corresponding verbs, denominal adjectives have corresponding nouns from which they are derived. Now consider the following examples in Table (5) :

The Denominal Adjective Noun Base

Denominal Adj.	Action N.	Verb Form	Gloss
(1) Concrete :			
bahiim-iyy	*	*	animal-like
barr-iyy	*	*	terrestrial
fulaaθ-iyy	*	*	metallic
qimaaf-iyy	*	*	cloth-like
jabal-iyy	*	*	mountainous
Hariir-iyy	*	*	silky
baabil-iyy	*	*	Babylon
(2) Concrete :			
caql-iyy	tacaqqul-iyy	tacaqqala	to become wise
jasad-iyy	tajassud-iyy	tajassada	to materialize
Hajar-iyy	taHajjur-iyy	taHajjara	to become stony
ciTr-iyy	tacaTTur-iyy	tacaTTara	to perfume
farc-iyy	tafarruc-iyy	tafarraca	to branch
zawj-iyy	tazaawuj-iyy	tazawwaja	to marry
caSab-iyy	tacaSSub-iyy	caSSaba	to become nervous
(3) Abstract :			
ziraac-iyy	ziraac-	zaraca	farming-like
diraas-iyy	diraas-	darasa	study-like (academic)
jinaa?-iyy	jinaay-	janaa	criminal
difaac-iyy	difaac-	daafaca	defensive
ginaa?-iyy	ginaa?-	gannaa	singing-like
tijaar-iyy	tijaar-	taajara	commercial
riyaaD-iyy	riyaaD-	tarayyaDa	sportive
ta?riix-iyy	*	?arraxa	historian
(4) Abstract :			
rabiic-iyy	*	*	springy
yawm-iyy	*	*	daily
yadaw-iyy	*	*	hand-like (manual)
Jahr-iyy	*	*	monthly
layl-iyy	*	*	night-like

Table (5)

In the above Table the bases which take the denominal adjective suffix *-iyy* denote concrete properties in (1-2) and abstract ones in (2-4). While all the examples have a corresponding noun base, whether concrete or abstract, some may have neither a corresponding verb nor an action noun (a definition of *action noun* is in order later in this section). This clearly shows that the base is a noun which can be derived or nonderived. Thus we can generalize that the denominal suffix is attached to a base noun. Notice that we cannot generalize that they do not have corresponding verbs, because some do. Consideration of the derived forms shows that some forms, like *tariix-iyy* "historian" in (3), can have a corresponding verb but no corresponding action noun. This shows that

having a coresponding action noun would entail a verb form. Therefore, later in this section we will consider the denominal adjectives that have corresponding action noun.

Thus, the simple conclusion which can be drawn from these examples is that denominal adjectives are derived from a noun base which can be concrete and may not have a corresponding action noun. This conclusion is very important in distinguishing between denominal adjectives, on one hand, and Simple and Participial adjectives on the other. While the former are derived from corresponding nouns the latter are derived from corresponding verbs.

In the above Table the examples in (2) are derived from concrete base nouns and can have corresponding action nouns. This is the difference between the nouns in (1) and those in (2). The former is called *?ism jaamid* "underived noun", and the latter is called *?ism mustaq* "derived". Both types are noted by Carter (1981) who states that :

" 'Underived noun' is *?ism jaamid*, lit. 'rigid noun', i.e. having no corresponding verb (hence no deverbative cognates such as participles etc.), contrasting with *?ism mustaq* 'derived noun'".

A similar division is made by Wright (1896 Vol I : 106) who called the former "primitive" and the latter "derivative". Thus the nouns in (1) can be called "underived" and those in (2) are derived. Thus, for example, both the concrete noun *jasad* "body" and its corresponding action noun *tajassud* "materialization", can take the denominal suffix to yield : *jasad-iyy* "bodily" and *tajassud-iyy* "materializational". Similarly the base concrete noun *Hajar* "stone" gives *Hajar-iyy* "stony" and its corresponding action noun *taHajjur* "petrification" would give *taHajjur-iyy* "petrificational". Thus, the concrete type of base noun can have a corresponding abstract noun, i.e. action noun in addition to the concrete one. The lack of such correspondences [between concrete vs abstract in those in (3-4)] makes the forms in (1-2) unmarked. This is not to deny that an abstract noun in (3-4) can have a variety of denominal adjectives derived from other types of corresponding action nouns. However, all are abstract. For example, *difaac* "defense" and *indifaac* "plunging" take the denominal suffix to yield respectively, *difaac-iyy* "defensive" and *indifaac-iyy*

"spontaneous". But it must not be understood that every form will have similar correspondences. The main point I wish to make is that the denominal adjectives derived from concrete nouns are the unmarked type although they can have corresponding derived action nouns. Now we will consider two different types of denominal adjectives occurring in the data which will give further evidence for our earlier statement. Consider the examples in Table (6) :

Denominal Adj.	Action N.	Verb Form	Gloss
(5) Borrowing :			
saykloj-iyy	*	*	psychological
sinfuun-iyy	*	*	symphonic
magnaaTiis-iyy	*	*	magnatic
niytrugin-iyy	*	*	nitrogenic
kiimaw-iyy	*	*	chemical
daynasuur-iyy	*	*	dynasourian
dinamiik-iyy	*	*	dynamic
tilfizyun-iyy	*	*	television-like
buliis-iyy	*	*	police-like
burjuwaaz-iyy	*	*	snobbish
?urusTuqraT-iyy	*	*	aristocratic
(6) Complex :			
ra?s-maal-iyy	*	*	capitalist
bin-zihiy-iyy	*	*	lemon-like (kindof lemon)
la-nihaa?-iyy	*	*	neg-end-DEN (endless)

Table (6)

In the above Table the examples in (5), which are borrowed from English, give further support to our claim above. They show that the denominal adjectives are derived from corresponding nouns which cannot have corresponding verbs. Notice that the forms preceding the suffix occur independently in Arabic, i.e. as nouns, thus, *niytrujiin* "nitrogen", *tilfizyun* "television"

The examples in (6) show that the denominal adjectives can have a corresponding "complex" base noun (or "compound"¹⁷) which is composed of two nouns. For example, *ra?as-maal-iyy* "capitalist" involves two nouns *ra?s* "head" and *maal* "money" followed by the suffix -iyy. Such a "compound" could not have been formed without the denominal

suffix *-iyy*. It represents two lexical items, the second of which is suffixed by *-iyy*. The negative particle *la*, in (5) : *la-nihaa?-iyy* "endless", cannot take the definite article, *?al-* "the", with other types of adjectives : **?al-la-kabiir* "the not big". However, it occurs in the data prefixed with it since the second item in the 'compound' takes the denominal suffix. Such morphological processes are impossible for Simple or Participial adjectives. However, such 'compound' adjectives are very rare, in fact these are the only examples occurring in the data. But similar examples are found in scientific texts as exemplified below :

34.a	bar-maa?-iyy land-water-DEN "amphibious"	34.b	xalf-miHwar-iyy back-axis-DEN "Postaxial"
35.a	?al-la-sabab-iyy the-neg-reason-DEN "achromatic"	35.b	?al-la-guluw-iyy the-neg-extravagance-DEN "acellural"
36.a	kahro-magnaaTiis-iyy electromagnetic	36.b	jïyu-fiiziq-iyy geophysical

The lexical items forming the "compound" in (34-35) involve Arabic elements, whereas those in (36) involve English ones. Such word formation of Arabic and loanwords is furnished by the suffix *-iyy*. Notice that such words are not according to the Arabic structure, and therefore, as noted by Ali (1987 : 124), are not typical. To quote,

"We may well mention here the fact that as a by-product of the use of non-analogical arabicized loanforms, such as the ones just cited, there now exist in Standard (especially scientific) Arabic features that are not characteristic of its system."

6.6.2 Gender/Number of Denominal Adjective Base :

It is always mentioned in grammar books that the base noun to which the the denominal suffix is added is masculine singular. We agree completely with this position although the data show that there are few base forms which can be considered as "collective" nouns, and few which can be considered as "inherent feminine". The data show that there are some denominal adjective base forms that occur in the plural to which the denominal suffix is attached. Consider the following examples :

Denominal A.	Gloss	Denominal A.	Gloss
1. ?igriiq-iyy	Greek	5. bafar-iyy	humanbeings
2. ?injliiss-iyy	English	6. nisaa?-iyy	women
3. ?afranj-iyy	westerns	7. qawm-iyy	tribe
4. turk-iyy	Turk	8. jacb-iyy	people

Table (7)

The above examples in (1-8) belong to type I (concrete) and denote a group of people. Those in (1-4) are loanwords whereas those in(5-8) are Arabic words. All the Arabic words occurring with the suffix have a denominal meaning carrying the same number of the corresponding base as opposed to the loanwords which carry in addition to the denominal meaning a different number, namely singular. Thus, for example, *qawm* means "nation" and *qawm-iyy* means "national", but *?ingliiz* means "a group of English Pl." and *?injiliiz-iyy* means "English Sg.". This shows that the correspondence in number between the base noun and the denominal adjective is the same for the Arabic words while different for the loanwords. Again, the irregularity seems to be associated with loanwords since the Arabic words above do not have singular and correspond to what Quirk et al (1985 : 303) calls "collective" nouns and to what Hasan (1976 Vol IV : 743) calls *?ism ?aljamc* "the noun of plural" which he defines as "a noun that indicates two or more and has no corresponding singular" (cf. Hasan 1976 Vol IV : 680). The base form in (6), *nisaa?* "women" is an example of an "inherently" feminine noun. Thus it is still correct to say that the denominal suffix is attached to a singular noun, with the exception of few loanwords

and Arabic "collective" nouns which have no singular to which the suffix can be attached. Moreover, since adjectives are neutral with respect to gender and number, i.e. they regularly take the gender and number markers, the denominal suffix neutralizes the number and gender of its base noun. Therefore, we find *Hi&aa?un nisaa?iyy* "shoe M. womenish M." and *jaa?iz-atun nisaa?-iyy-atun* "prize-F. womenish-F". This clearly shows that the base *nisaa?* "women" has been neutralized for gender after the attachment of the denominal suffix *-iyy* which is a characteristic feature for denominal adjectives. With respect to the gender of the base noun it must not be morphologically feminine, i.e. it cannot carry a feminine marker to which the suffix is attached.

To sum up, it has been argued that the base from which the denominal adjective is derived is a noun masculine singular. Some of the "collective" and some of the "inherent feminine" base forms have been discussed, and shown that they do not vitiate the above statement.

6.6.3 The Productivity of Denominal adjectives :

What nouns can take the Arabic denominal suffix *-iyy* ? This is the question which I will try to answer in this section and the following one. It is discussed earlier that the denominal adjective suffix is attached to a masculine singular noun. Thus the denominal adjective base must be a masculine singular noun. However, we do not find in the literature of Arabic linguistics any explanation as to whether the type of the base noun is predictable. Although there is extensive discussion of the phonological changes that a base noun undergoes when taking the denominal suffix *-iyy*, a discussion about the type of this base noun is absent. In this section and the following two ones we will try to fill this gap.

Any lexical theory of word-formation discusses the characteristic of "creativity" inherent in the speaker's way of handling the lexical stock of his native language. The language speaker has a derivational creativity which enables him/her, by using a finite set of means, i.e. the denominal suffix *iyy*, to produce a practically infinite number of words, i.e. denominal adjectives in our case. That is why Aronoff (1976 : 19) states that :

"The speaker always has the capacity to make up new words which he can then add to his repertoire".

This is not a new concept. Bloch in 1942 states explicitly a similar view :

"Affixation is by far the most common process in the formation of English derivatives. Moreover, many of the affixes are productive, in the sense that a speaker of English can form new derivatives which he has never heard by adding these affixes to appropriate bases". (Bloch 1942 : 62)

However, in more recent studies, the concept of "creativity" is distinguished morphologically from that of "productivity". Thus Bauer (1983 : 63), following Lyons (1977 : 549), gives his own definition. To quote,

"Following Lyons (1977 : 549), a distinction will be drawn here between **productivity** and **creativity** (emphasis not mine). Productivity is one of the defining features of human language, and is that property of language which allows a native speaker to produce an infinitely large number of sentences, many (or, most) of which have never been produced before. It is assumed that productivity is to be accounted for by the rules of a generative grammar. Creativity, on the other hand, is the native speaker's ability to extend the language system in a motivated, but unpredictable (non-rule-governed) way".

Because of this "non-rule-governing" concept associated with creativity, it is a general practice of linguists to study "productivity" and ignore "creativity". We would not challenge that. However, it must be stated that Bauer (1983 : 63) himself states that :

"Both productivity and creativity give rise to large numbers of neologisms, but in what follows it is only rule-governed innovation, that is productivity, which will be discussed. [...], although it would no doubt be possible to provide a taxonomy of types of creativity".

Such a "taxonomy", which is not impossible, is what we are after in this section. This is exactly the position taken by Isitt (1983 : 11) who studies the English adjectival suffixes, *-al*, *-ic*, *-ly*, and *-y* and warns the reader in his introduction that "a living language is neither mechanical nor fully systematic. If we do discover factors which influence suffix choice in new words, we can also expect plenty of exceptions"¹⁸. Therefore,, although the

phenomenon we are going to discuss is not fully productive, i.e. does not account for all denominal adjectives, we feel that the discussion is justified to do so since such a rule is consistent, at least, with one type of denominal adjectives.

6.6.4 The Types of Arabic Denominal adjective Base :

If we are dealing with the derivation of some definitely unproductive pattern, we would have no problem since there would be no need for any generalization in order to eliminate such marginal pattern. However, the issue becomes much less clear with respect to the more productive patterns which include a large number of items. Do we ignore such patterns or do we try to find a "possible taxonomy" ? We will adopt the latter course, not aiming at a rule-governed system, but seeking general tendencies, in the sense of Hurford (1983 : 62)¹⁹.

The data show that there are 338 different denominal adjectives which occur in different forms (considering agreement categories) in 1238 occurrences. We divided the Arabic base noun from which a denominal adjective is derived into concrete vs abstract, and we found that derived nouns can belong to either types, i.e. a derived noun can be either concrete or abstract. We then looked for the corresponding verb for each, and divided them into those that have corresponding verb as opposed to those which do not. Notice that we use the criteria of having a corresponding action noun because it presupposes the presence of a verb. The result is summarized in Table (8) below :

	Types of Denominal Adjective Base		
	Concrete	Abstract	Total
Without Corresponding Action Noun	103	35	144
With Corresponding Action Noun	64	136	194
Total	167	171	338

Table (8)

The above Table shows that the total number of forms that are concrete is almost similar to those which are abstract (167/171) respectively. It also shows that the most frequent type

of denominal adjective base is the action noun which occurs in 136 different denominal adjectives. However, the above Table cannot distinguish between adjectives actually occurring in action noun base (136) and adjectives occurring in concrete base and which can have corresponding action noun base, i.e. the Table cannot distinguish between types I and III below :

- I. There are **64** denominal adjectives derived from concrete noun bases which have corresponding action nouns (see Appendix III, 1-64).
- II. There are **103** denominal adjectives derived from concrete bases which do not have corresponding action nouns (see Appendix III, 65-167)
- III. There are **136** denominal adjectives derived from abstract base nouns which are either action nouns, i.e. the base itself is an action noun, or has a corresponding action noun (see Appendix III, 168-303)
- IV. There are **35** denominal adjectives derived from abstract base nouns which do not have corresponding action nouns (see Appendix III, 304-338).

Whether or not a concrete noun base would take a denominal suffix is not predictable as shown in the Table below.

	Concrete	Gloss	Den A.	Gloss	Action N.	Gloss
1.	muʃT	"comb"	*muʃTiyy		tamʃiiTiyy	"combing-like"
2.	milqaaT	"tong"	*milqaaTiyy		talqiiTiyy	"picking-like"
3.	minʃafat	"towel"	*minʃafiyy		tanʃiifiyy	drying-like
4.	mirwaHat	"fan"	mirwaHiyy	fan-like	tarwiiHiyy	intertaining

Table (9)

The nouns in the above Table are called *?asmaa? Al-?aalah* "The nouns of instrument". The instrument nouns in (1-3) have no corresponding concrete denominal adjectives, therefore, the corresponding concrete denominal adjectives are asterisked. From the concrete noun in (4), unlike those in (1-3) we can derive a denominal adjective. This clearly shows that the predictability of deriving a denominal adjective from a concrete noun base is

belong to non-Arabic terms. There are some other residuals in this class such as : *Daruur-iyy* "necessary", *?usTuur-iyy* "imaginative", *ruuH-iyy* "spiritual". I included these examples with this class because they are abstract and lack a corresponding verb. However, if one argues that they have the following corresponding verbs respectively : *Darara* "to harm", *saTTar* "to write", *raaHa* "to revive the spirit", then, we can include them with Type III (abstract derived from action noun). Notice that this constitutes no problem for type III since they all can have corresponding action nouns which can take the denominal suffix : *taDriir-iyy* "harming-like", *tasTiir-iyy* "writing-like", *tarwiiH-iyy* "reviving-like". The only difference between such denominal adjectives and type III is that they are not derived from action nouns, whereas the latter are. Therefore, we have either to postulate another type, namely one that includes those denominal adjectives which are derived from abstract noun which is not an action noun but which can have a corresponding action noun, or we can include them with type III. We will take the latter solution and include them as a subclass of type III. This is because we do not wish to establish more and more classes, each covering very few nouns, because this leads to a situation where all the semblance of generality is lost (cf. Lyons 1968 : 153). In short, we may not be able to include more and more classes to the point of "diminishing returns" (cf. Lyons 1968 : 152-153).

Having discussed types I, II, and IV, we will discuss type III and try to find constraint on the derivation of the 136 denominal adjectives belonging to this type. Thus, we investigated the abstract base nouns which have corresponding action noun in order to look for any kind of system "creativity" that governs the derivation of the corresponding denominal adjectives. The findings are discussed below.

6.6.5 Predictability of The Denominal Adjective Base :

In order to investigate the derived noun we have to look at the derived noun patterns. Wright (1896 Vol I : 110) classified them into two types : "Deverbal" and "denominative". The former is divided into six types and the latter into four types with some overlaps between them. What concerns us is the first type. The 136 denominal adjective base nouns found in the data which belong to type III are compared to the deverbal patterns put by Wright in order to see whether there is a general tendency towards favouring certain patterns, rather than others, to derive the denominal adjectives. According to Wright the deverbal nouns include the following types :

- a. The Nomina Verbi
- b. The Nomina Vicis
- c. The Nomina Speciei
- d. The Nomina Loci et Temporis
- e. The Nomina Instrumenti
- f. The Nomina Agenti et Patientis and other verbal Adjectives.

On the other hand, the Denominative Nouns include the following :

- a. The Nomina Unitis
- b. The Nomina Abundantiae
- c. The Nomina Vasis
- d. The Nomina Relative or Relative Adjectives.

Notice that the "Nomina Relative Adjectives" is not discussed according to certain patterns, i.e. those that can or cannot take the denominal suffix. This is a general practice followed in the traditional grammar books where we find extensive explanation of the phonological changes in the base form resulted from the attachment of the denominal suffix. However, we are not interested in such changes. Instead, we are interested only in a general rule according to which we can "predict" whether a form can or cannot have the denominal suffix. But this is immediately faced by difficulties, as discussed above with

respect to types I, II and IV, since there is no such a rule. Therefore, we have to change our hypothesis and look, instead, for a possible tendency (creativity) that governs type III.

Wright (1896 : 110) defines the *Nomina Verbi* as :

"The *nomina verbi*, ?ismaa? Al-?afcaal, are abstract substantives, which express the action, passion, or state indicated by the corresponding verbs, without any reference to object, subject, or time."

Comrie and Thompson (1985 : 368) discussed briefly the same forms in Arabic and called them *action nominal* which are defined as those nouns created "from lexical verbs and adjectives. The resulting nouns may be the name of the activity or state designated by the verb or adjective" (Comrie and Thompson 1985 : 349). We define the action noun, which is called by the traditional Arab grammarians *maSdar*, which literally means "source", as those nouns that denote the general concept of action or state abstracted from the whole set of inflectional variations of a verb.

The Arabic "*Nomina Verbi*" derived from a corresponding verb Form I (triliteral), according to Wright, has 44 different forms some of which (15 patterns) are indicated as rare by Wright. The rest are derived from the other verb Forms, i.e. Forms II-X (quadriliteral). Examples in the data do not occur in all the 53 different Forms. Some of these forms are very frequent, others, however, are not. The following are examples of the action noun patterns that occur in the data followed by one example of each and numbered sequentially from 1 to 22. Those in (1-13) represent the action nouns of Form I (the numbers in parenthesis show the corresponding numbers given to them by Wright 1896 Vol I : 100-11). The action nouns in (14-22) correspond to Forms II-X respectively.

Form I

- | | | | | |
|----|-----|---------|-----------|---------------|
| 1. | (1) | /FaCL/ | xayr-iyy | "beneficiary" |
| 2. | (2) | /FaCaL/ | camal-iyy | "practical" |
| 3. | (3) | /FiCL/ | fikr-iyy | "mind-like" |
| 4. | (6) | /FuCL/ | culw-iyy | "top-like" |

- | | | | |
|----------|------------|-------------|---------------------|
| 5. (22) | /FiCLann/ | cidwaan-iyy | "attak-like" |
| 6. (25) | /FaCaaL/ | xayaal-iyy | "imagination-like" |
| 7. (26) | /FiCaaL/ | difaac-iyy | "defensive" |
| 8. (27) | /FuCaaL/ | fujaa?-iyy | "surprise-like" |
| 9. (28) | (FaCaaLat/ | HaDaar-iyy | "civilization-like" |
| 10. (29) | /FiCaaLat/ | ziraac-iyy | "farming-like" |
| 11. (32) | /FaCuuL/ | jahuur-iyy | "voicing-like" |
| 12. (33) | /FuCuuL/ | hujuum-iyy | attack-like |
| 13. (38) | /FaCiilat/ | Haqiiq-iyy | fact-lik |

Forms II-X

- | | | | |
|-----|--------------|----------------|----------------------------------|
| 14. | /taFCiiL/ | taHDiir-iyy | "preparational" |
| 15. | /FiCaaL/* | difaac-iyy | "defensive" |
| 16. | /?iFCaaL/ | ?islaam-iyy | "submission-like, i.e. Islamic" |
| 17. | /taFaCCuL/ | tahakkum-iyy | "derisive" |
| 18. | /taFaaCuL/ | tafaa?ul-iyy | "optimism-like, i.e. optimistic" |
| 19. | /?inFiCaaL/ | ?intiqaaam-iyy | "revenge-like" |
| 20. | /?iFtiCaaL/ | ?ixtiyaar-iyy | "selective" |
| 21. | /?iFCiLaaL/ | ?ibdaac-iyy | "creative" |
| 22. | /?istiFCaaL/ | ?istikJaaf-iyy | "explorational" |

The following are few examples of some of the above denominal adjective patterns.

- 38.a wa ?ad-daliil-u ?an-naql-iyy-u
 and the-proof-NOM the-carrying-DEN-NOM
 "And the traditional proof". (E64)
- 38.b ?anna fi ?ad-diin-i Zaahirat-un Hiss-iyy-at-NOM
 that in the-religion-GEN phenomenon-NOM sense-DEN-F.-NOM
 "That in religion (there is) a perceptible phenomenon". (J57)

- 38.c li ?al-waSf-i ?at-tafSiil-iyy-i
 for the-description the-detail-DEN-GEN
 "For the detailed description". (F57)
- 38.d li ?ixlaadi-hi ?al-?ijbaar-iyy-i ?ila ?ar-raaHat-i
 for stay-his the-obligation-DEN-GEN in the-rest-GEN
 "For his obligatory stay in rest". (J213)
- 38.e ?al-gaaraat-u ?al-?istikJaaf-iyy-at-i
 the-attacks-NOM the-exploration-DEN-F.-NOM
 "The explorational attacks". (J27)

In the above examples the denominal suffix is attached to different types of base nouns. In (38.a) and (38.b) the base noun is a trilateral corresponding to Forms (1) and (3) respectively. In (38.c), (38.d) and (38.e) it is a quadrilateral and corresponds to Forms (14), (16) and (22) respectively. It is also interesting to note that example (38.a) shows clearly that the meaning of a denominal adjective is not predictable which constitutes a problem to an analysis like that of Levi's, for example. In this example the base noun is *naql* which is translated into English as "carrying", however, the resulting denominal adjective is *naqliyy* which means "traditional". Although it could be argued that the two are semantically related since we "carry experience from generation to generation", the same denominal adjective can occur in a different context having the literally "carrying" meaning viz. *?alcarbaat ?an-naqliyy-at* "the carrying cars, i.e. not for passengers". Thus whether a denominal adjective like *nqliyy* will have one meaning or the other is not predictable and consideration of the modified head noun is crucial.

All the 136 denominal adjectives occurring in the data with corresponding action noun base belong to the above 22 action noun patterns²⁰. The examples in (1-13) show the **trilateral** corresponding action nouns and those in (14-22) show the **quadrilateral** ones. The patterns in (7) and (15) are the same. This is an example of the overlap between the patterns we mentioned above. The boldface sequence *-at* in (9), (10) and (13) is deleted by a general phonological rule before the attachment of the denominal suffix. The above

examples show that all the quadriliteral action noun base in (14-22) occur in the data. There are many other quadriliteral examples occurring in the data, the above are just few examples. On the other hand, only 13 of the 44 trilateral action nouns represented in Wright occur in our data. It is also interesting to note that the trilateral forms indicated by Wright as rare do not occur in our data. Thus, we may state the following :

- i. The formation of the denominal adjectives from quadriliteral action nouns is very strong. Now, on the basis of this regularities in these action nouns, one may predict that a denominal adjective is derived from every quadriliteral action noun. However, the accuracy of this statement is partially derived from our data, since other data must be considered in order to give such a strong statement.

But if more than 22 hundred pages of written Arabic data show this fact, what can the other data show ? As a native speaker of Arabic, I cannot think of any quadriliteral action noun Form from which we cannot derive a possible denominal adjective. Moreover, this systematic occurrence in the data must be explained as opposed to the unsystematic occurrence of the denominal adjectives derived from trilateral action nouns.

- ii. The formation of the denominal adjectives from trilateral action nouns is not as strong as the former. Therefore, whether a trilateral action noun would or would not take a denominal adjective suffix cannot be predicted. The accuracy of this statement is derived directly from our data.

But is there a proof for our claim in (i)? I think, there is. The proof should come from other types of nouns, i.e. concrete rather than abstract. Since consideration of the abstract nouns derived from action nouns shows a predictability of deriving a denominal adjective from quadriliteral forms, the proof must come from concrete nouns which have corresponding action nouns, i.e. type I . If it is found that all such concrete nouns cannot have corresponding quadriliteral action nouns, our generalization in (i) is not accurate. On the other hand, if it is found that all the concrete nouns can have corresponding quadriliteral

action nouns from which a denominal adjective is derived, it means that our generalization in (i) is accurate. Therefore, concrete nouns and their corresponding action nouns, such as those in type I, are very important, and we will discuss them below.

6.6.6 Concrete Base with Corresponding Action N Base :

The data show that there are 64 different denominal adjectives derived from concrete base which can have corresponding verb. A close look at them shows that all, except *tilifizyuniyy* "television-like", which is a loanword, can have a corresponding quadriliteral action noun. The following are just few examples (for more examples see Appendix III, 1-64).

Noun	Gloss	Denominal A.	Gloss	Quad. Action N Base	Gloss
1. zawj	husband	zawj-yyy	husband-like	tazawiij-yyy	marrying-like
2. zayt	oil	zayt-yyy	oily	tazyiit-yyy	oiling-like
3. jism	body	jism-yyy	body-like	tajsiim-yyy	emodiment-like
4. buxaar	steam	buxaar-yyy	steam-like	tabxiir-yyy	evaporating-like
5. farc	branch	farc-yyy	branch-like	tafriic-yyy	branching-like
6. jasad	body	jasad-yyy	body-like	tajsiid-yyy	embodiment-like
7. kitaab	book	kitaab-yyy	bookish	taktiib-yyy	writing-like
8. wafd	arrival	wafd-yyy	a member of Wafd	tawaafud-yyy	arriving-like

Table (10) (Quad. = quadriliteral)

The examples in (1-8) are concrete nouns which have both concrete and quadriliteral action noun denominal adjectives. The quadriliteral action patterns in the above Table correspond to patterns (14), as in examples (1-7), and pattern (18), as in example (8). All the 64 examples in the data are like these ones. That is, they have corresponding quadriliteral action noun from which a denominal adjective can be derived. Thus, the concrete noun *jism* "body" has *jism-yyy* "bodily" and *tajsiim-yyy* "embodiment-like". On the other hand, most of the examples cannot have corresponding triliteral action noun. Thus from, *farc* "branch", for example, no triliteral action noun is possible. Most of the 64

examples cannot have corresponding trilateral action noun. However, a few, such as those in (7-8) can have a trilateral action noun in addition to the quadrilateral one : *kitaabat* "writing" and *wafd* "arrival" which correspond to patterns (10) and (1) respectively : /FiCaaLat/ and /FaCL/. One more problematic example is *?i&aac-iyy* "radio station-like" which I included with Type I, although it has two corresponding trilateral action nouns : *?i&aacat* "broadcasting" and *&uyuuc* "widespreadness". One may suggest to include it with Type III but this is not possible simply because it does not have corresponding quadrilateral action noun whereas all those in Type III do. But notice that since it does not have a quadrilateral action noun it does not vitiate the statement in (i). The problem seems to be related to our identification of Type II which should be adjusted to : denominal adjectives derived from concrete base nouns which do not have corresponding quadrilateral action noun, rather than any action noun. Thus there are three facts to note here :

- a. All the 64 denominal adjectives derived from concrete base noun can have corresponding quadrilateral action noun from which a denominal adjective is derived.
- b. Most of the 64 denominal adjectives do not have corresponding trilateral action nouns.
- c. A few of the 64 denominal adjectives can have both, i.e. a quadrilateral and trilateral action noun.

If the above is true, it clearly shows that the concrete noun which has a verb systematically has a corresponding quadrilateral action noun, from which a denominal adjective is derived; and rarely has a trilateral one. This statement, which is derived directly from our data, seems to give further evidence as to the accuracy of our generalization in (i).

To sum up, it has been discussed that the Arabic denominal base noun from which a denominal adjective is derived can be divided into four different types.

- I. Concrete with corresponding action noun,
- II. concrete without a corresponding action noun,
- III. abstract with corresponding action noun and
- IV. abstract without corresponding action noun

It is found that no predictability could be stated as to whether a **concrete base** noun can or cannot take a denominal suffix. Therefore, we tried to look for any possible generalization with respect to the abstract base. We found that a generalization could be given by considering type (III). This generalization, as stated in (i) above, predicts that a denominal adjective can be derived from any quadrilateral action noun. To give evidence as to the accuracy of this generalization, we considered type (I) and found that it complements our generalization since all the concrete nouns in type (I) can have corresponding quadrilateral action nouns from which a denominal adjective can be derived. Therefore, we concluded that a denominal adjective can be derived from any quadrilateral action noun, as opposed to the trilateral ones which are not predictable. Any attempt to reduce the power of this statement would have to account for the systematic consistency found in the data with respect to the quadrilateral base as opposed to the inconsistency in the trilateral ones.

6.6.7 The Denominal Adjective Suffix *-aaniyy* :

Although in the above discussion we only described the Arabic denominal suffix *-iyy* it is not the only suffix occurring in the data. The suffix *-aaniyy* is also found. However, while the former occurs in various denominal adjectives 1233 times the latter occurs only in 5 examples. This clearly shows that the latter is very unproductive. They are considered as breaking the rules of the denominal adjectives and treated as exceptions in Ibn Maalik (died 1274) (1966 : 806) and in Sibawayhi (died 793) (Vol II : 89). The TAG books mention that the Basra's people had the custom of relating certain place-names after the names of certain well-known members of the society e.g. *muhallabaaniyy* after Muhallab Bin ?abiy Sufra (cf Ayyub 1966). Our data confirms the traditional grammar references which assert that this suffix is very rare. The examples found in the data are :

39.a fi ?agSaani-hi ?ar-rafiic-at-i ?al-?urjuw-aaniyy-at-i

in branches-its the-thin-F.-GEN the-purple-DEN-F.-GEN

"In its thin purple branches."

(C157)

- 39.b fi Hujrat-in taHt-aaniyy-at-in muglaq-at-in
 in room-GEN bottom-DEN-F.-GEN closed-F.-GEN
 "In a closed room downstairs." (G21)
- 39.c hiy ?al-fataat-u ?al-?iskandar-aaniyy-at-u
 she the-girl-NOM the-Alexandria-DEN-F.-NOM
 "She is the Alexandrian girl." (G61)
- 39.d ?al-mucaakasaat-i ?aS-Siby-aaniyy-ati
 the-harassments-GEN the-child-DEN-F.-GEN
 "The childish harassment." (K91)
- 39.e fi ?aS-Saalat-i ?al-micSar-aaniyy-at-i
 in the-hall-GEN the-oil-DEN-F.-GEN
 "In the oil-lamp hall" (K109)

None of the above underlined denominal adjectives has a quadrilateral pattern which shows that there is a probability that this irregular suffix *-aaniyy* is associated with the irregular (i.e. unpredictable) trilateral pattern. The Cairene academician Jirjiis (1967 Vol II : 181-198 majallat majmac Al-lugah Al-carabia MMLC) studies the suffix *-aaniyy* and collected data from traditional grammar books and dictionaries. He concluded his study by noting that the majority of the forms he collected belong to the trilateral patterns, and the rest are loanwords. Elsewhere, he notices that the suffix can have the following functions :

1. It indicates *nisbah majaaziyyah* "metaphoric relation". Thus, as he claims, the suffix *-aaniyy* is used when there is no possibility of relating a thing or person to certain object. Thus the word *rabb-iyy* "God-like" is used to mean that 'something is related to God as part of His essence' whereas *rabb-aaniyy* is used to refer to a "metaphoric" relationship of something to God. In the same way *ruuH-iyy* would be used to mean 'the souls of human beings' as opposed to *ruuH-aaniyy* which means 'the souls of angles'.

2. Jirjiis also notes that the suffix *-aaniyy* indicates what he calls *mubaalagah fi ?al-nisbah* "hyperbolic use of relation". Thus to 'exaggerate a certain relation', the suffix *-aaniyy* rather than *-iyy* is used.

However, it must be stated that the suggestion made by Jirjis is not a general rule. this because of the following reasons :

i. Our data show that the suffix *-aaniyy* is extremely rare.

ii. The suffix *-aaniyy* occurring in the five examples in our data can be used synonymously and interchangeably with the suffix *-iyy*, with the exception of the loanword in (1.a) namely *?urjuwaaniyy* "purple". Even in this loanword the sequence *-aan* does not seem to be part of the suffix *-aaniyy* as those in (1.b-1.e). This is because the sequence **?urjw* does not occur in Arabic which shows that there is a possibility that the suffix in this loanword is *-iyy* which is attached to the attested form *?urjuwaan*

iii. There are many words which do not take the suffix *-aaniyy* such as *diin-iyy* / **diin-aaniyy* "religious", *camal-iyy* / **camal-aaniyy* "practical", *zayt-iyy* / **zayt-aaniyy* "oily", *fulaaṣ-iyy* / **fulaaṣ-aaniyy* "steely". This clearly shows that the suffix *-iyy* occurs with many denominal adjectives where the suffix *-aaniyy* cannot. Thus there are positions where the suffix *-aaniyy* occur and could be replaced by the suffix *-iyy* , and there are positions where the former is excluded. This clearly shows that the suffix *-aaniyy* is a variant of *-iyy*²¹. Furthermore, even if we agree with Jirjis in employing the suffix *-aaniyy* for "metaphoric" use, it shows that this suffix is not the norm since its meaning is restricted. Moreover, if it is true that the suffix *-aaniyy* , as Jirjis claims, is attached to the trilateral rather than the quadrilateral, it means that the exceptional cases are associated with the former, and this gives further evidence as to the accuracy of our statement in (i). Therefore we conclude that, although the suffix *-aaniyy* may have a very marginal representation in very few items, it is generally considered as a variant of the more common and more frequent suffix *-iyy*.

6.7 Concluding Remarks

In this Chapter the morphological, syntactic and semantic characteristics of Arabic denominal adjectives are discussed. It is noted that there are two leading approaches regarding the meaning of the denominal adjectives. According to the first approach denominal adjectives have an endless number of meanings. This theory emphasizes the fact that the only possible paraphrase for a denominal adjective is "pertaining or connected" and therefore, the meanings of denominal adjectives are, in principle, infinite. Although the morphology of Arabic denominal adjectives is very helpful in distinguishing denominal adjectives in Arabic, which uses one suffix, their range of meanings cannot be constrained, since the contribution of the head noun is crucial. This provides a strong evidence supporting the claim advocated in the first approach. On the other hand, the second approach is found to be problematic since it could not predict the various unlimited meanings of the denominal adjectives.

A prototypical account of denominal adjectives is suggested. The various meanings of denominal adjectives are arranged around the prototypical meaning "related to the head N somehow", which accommodates the marginally deviant concepts by bringing them into existence as peripheral members of the relevant category, maintaining the overall structure of the category itself.

Finally, the base from which Arabic denominal adjectives are derived is classified into various types in an attempt to find whether deriving a denominal adjective is predictable. It is found that those derived from concrete nouns are not predictable while those derived from quadrilateral action nouns are predictable. A supportive argument is put forward as to the accuracy of this prediction. The concrete base for various denominal adjective is found to have corresponding quadrilateral action nouns from which a denominal adjective is derived. This adds another evidence for the predictability of deriving a denominal adjective from a quadrilateral action noun.

- 1 See Beard (1976).
- 2 Examples of Simple adjectives found in the data which do not have corresponding verb Form I are *jaahiq* "high", *faaqic* "bright", and *Taazij* "fresh". The first adjective is not related to the verb *jahaqa* "to inhale or to sigh", the second one is not related to the verb *faqaca* "to crack", and the third one is not listed in the Hans Wehr Dictionary nor in Al-mucjam Al-carabi Al-Asaasi "The Essential Arabic Dictionary"; however, I think it has no verb Form I. I found no corresponding verb of any other Form for these three adjectives. Probably that is why they do not have verb Form I.
- 3 Since the meaning of 'relation' is very central to denominal adjectives, it is, a characteristic feature in the literature that certain studies focus on denominal adjectives ignoring 'qualitative' adjectives which are peripheral to them such as Ljung (1970) and Levi (1976). An exception to this is Warren (1984).
- 4 This shows the importance of working on computerized data based on written-texts.
- 5 Emphasis is not mine since Levi insists that only these predicates are possible. To quote,

"The set is made up of nine predicates : CAUSE, HAVE, MAKE, USE, BE, IN, FOR, FROM, and ABOUT. These predicates, and only these predicates, may be deleted in the process of transforming an underlying relative clause construction" (cf. 1978 : 76).

- 6 This example is due to Newmeyer (1979 : 400). Although some native speakers think that such an example is an idiom rather than a compound. But whether it is one or the other does not matter since compounds are defined semantically, rather than formally, and must be stated in the lexicon, they are not different in this respect from idioms.
- 7 High frequency suffixes are decided arbitrarily (cf. Ljung 1970 : 16) :

"Let us define 'high-frequency' quite arbitrarily as a suffix which occurs with ten or more different stem types in our corpus."

This shows that the suffixes are obtained without consideration to the meaning they have. Moreover, some suffixes are not treated systematically. A suffix like *-ed*, for example, is not included, however, it is mentioned in passing in connection with concrete count nouns containing a HAVING relation based on 'inalienable possession' (1979 : 80).

- 8 The connecting link "constituted by", for example, corresponds to the Role Combination "SOURCE-RESULT". Thus, *criminal case* is paraphrased as "case constituted by a crime". The connecting link "constituting" corresponds to the Role Combination RESULT-SOURCE, which is paraphrased as "assault constituting a crime".
- 9 Probably because of the easiness of their morphological identification, this type of difference unseen in Arabic. The only study, which I am aware of, that makes such a distinction is Kenawy (1982 : 318) who distinguishes, in a short paragraph, between those that occur attributively and those which do not. He observes in examples like (1) the adjectives must be definite and their function is identification rather than classification as opposed to those in (2) :

- 1.a qadima ?aʃ-jayxu ?al-carabiyyu
came the sheikh the-Arabian
"The Arabian sheikh came."
1.b fi cahdi ?ad-dawlati ?al-ʔamawiyati
in time nation Omiad
"during the Omiad nation"
2.a bi lisaanin carabiyyin mubiin
with tongue Arabian clear
"with a clear Arabian tongue."
2.b rajulun tamiimiyyun
"a Tamimite man (a man from Tamiim)"

Thus according to Kenawy the underlined adjectives in (1) differ from those in (2) since they are definite and have an identification function. But notice that these adjectives can be indefinite, i.e. the same examples can be indefinite. This makes the feature of definiteness irrelevant. In the second distinction related to their function Kenawy seems to follow Teyssier (1968) who divides noun modifiers into three types : classifying, identifying, and characterizing, although Kenawy did not mention Teyssier. We will discuss this point when we treat Warren (1984) study who adopts Teyssier's three functions.

- 10 Sibawayhi discusses denominal adjectives in a separate section which he calls *baab Al-ʔiDaafah* which he defines as *baab ʔan-nasab* "the section on relation". He identifies the denominal suffix and calls *yaaʔ Al-ʔiDaafa*.
- 11 Although Levi differentiates between the two types and provides evidence as to their difference her theory cannot be acceptable. She tried unsatisfactorily to differentiate between the two types in terms of some transformational analysis using what she calls Predicate Deletion Rule.
- 12 Although this criteria is very accurate there seems to be some adjectives which can occur in predicative position and do not accept modification by intensifiers such as *Haamil* "pregnant", *yatiim* "orphan", *Dariir* "blind", *kafiif* "blind", *caqiim* "barren". Such adjectives are "semantically natural" in the sense of J. Anderson (1977) On Case Grammar. These adjectives belong to the "central" type since they can occur predicatively and attributively. However, the fact that predicating adjectives include both intensifiable and nonintensifiable adjectives does not affect the force of the relevant argument.
- 13 Bolinger (1967b : 4) observes an important characteristic of English adjectives that can take comparison : "they admit phonological lengthening, itself a way of expressing a high degree of something : It's deep! /di:p/; He's studious! /stu:dyəs/; It's a long /l / way; but not It's proportionate */prəpɔ:rʃənət/, It's biological */bayələ:jɪkl/."
- 14 Levi (1978 : 20) quoting Barting (1976).
- 15 Bierwisch (1967) observes that :

"the lack of polarity is by no means a superficial fact. It is very well known that color words which do not have polar distinctions, are learned by the child far later than pairs as gross and klein, etc. This may be the case also for words such as nacht, taub, etc. Polarity then is basic in more than one sense."

It is noteworthy that when the general order of adjectives is discussed, it will be noted that adjectives with [+Polarity] feature follow adjectives with [-Polarity] feature. For more on polar opposites see Cooper (1973 : 61-68).

- 16 The problem related to the denominal adjective suffix is noted by Isitt (1983 : 11) who studies the English adjectival suffixes *-al* , *-ic* , *-ly* and *-in* and writes that :

"Although these suffixes all carry the same syntactic function ("adjective") they are seldom interchangeable. We may say manly and fishy but not *manny and *fishly , verbal and Celtic but not *Celtical and *verbic. Even on those occasions when there is interchange or superimposition of two of our suffixes on the same stem we often feel that the resulting forms are not equal, there being usually a strongly felt shift of style, imagined context, or even meaning; examples are basal : basic economic : economical ."

He goes on to say,

"It will be unwise to exaggerate this rigidity. A living language is neither mechanical nor fully systematic. If we do discover factors which influence suffix choice in new words, we can also expect plenty of exceptions."

- 17 The term compound as used in English does not apply to Arabic, therefore, it is put in quotation marks. However, there are two types of "compounds" in Arabic which are called *murakkab ?isnaadiy* and *murakkab mazjiy* . The former can be exemplified by *ta?abbaT jarran* "he carried mischief under his arm, the nickname of a celebrated poet and warrior), and the latter is exemplified by some country names such as *baclabak* "Balabak" or *HaDramuut* "South Yamen". Hasan (1974 Vol IV : 740) and Wright (1896 Vol : 160) observe these types of 'compounds' and state that in this case the denominal suffix is attached to the first word and the second is deleted. Thus, according to them, we will have *ta?abbuT-iyy* for the first type and *bacl-iyy* and *HaDr-iyy* for the latter.
- 18 It must be noted that such a position should not be extended to influence productivity in general. Therefore, we do not agree with Bolinger (1967 : 31, note 20) who states that "word-formation is a transformational wilderness". However, we would agree with Szymanek (1989 : 24) who sees productivity as a gradable concept :

"It has often been stressed that productivity in morphology is a gradable concept. In particular, if one compares the systems of derivation and inflection, it turns out that in derivation there are likely to be large numbers of unpredictable gaps in the system, whereas inflection is much less likely to have such unpredictable gaps. In this sense derivational morphology is often referred to as semi-productive, in contrast with categorial productivity of inflectional paradigms."

- 19 Hurford (1987) studies the numeral systems in various languages and notes that :

"There are a large number of non-trivial universals (however they may be identified) which apply only conditionally to languages. The point has to be made because almost all of the properties of numeral systems that I shall discuss are universal tendencies. That is, they are intuitively non-trivial statements true of strikingly large number of languages, though not completely exception-free."

20 The exceptions are very few. These are as follows :

Base N.	Gloss	Den A.	Gloss
1. qaanuun	law	qaanuun-iyy	lawful
2. kahrubaa?	electricity	kahrubaa?-iyy	electrical
3. diin	religion	diin-iyy	religion-like
4. *Suuf		Suufiyy	one of the Islamic way of life (mysticism)
5. xaarij	outside	xaarij-iyy	outside-like
6. jaanib	side	jaanib-iyy	side-like
7. daaxil	inside	daaxil-iyy	inside-like
8. taHt	downstairs	taHtaaniyy	downstairs-like
9. caaTifat	emotion	caaTif-iyy	emotional
10. jaahil	fool	jaahil-iyy	pre-Islamic-like

The examples in (1-2) are loanwords. Those in (3-4) are neither triliteral nor quadriliteral. They are called hollow words by Cowell (1964 : 44) in which the middle radical is lost. Cowell defines them as words in which "a middle radical is changed, lost or fused". The examples in (5-10) belong to the pattern /FaaCiL/ of the active participle, rather than that of the action noun. The items in (5-8) indicate different locations. Some linguists consider them as adverbs or prepositions. Bishai (1971 : 122) observes such elements and states that they :

"are sometimes called prepositions. However, phrases such as *min taHtihi* "from under" [...], which do occur in the language, indicate that they are still functioning as nouns. They are, therefore, better explained as adverbs than as prepositions".

21 I know two examples where you can use each suffix to have a different meaning :
cilm "science" *cilm-iyy* "scientific" *cilm-aaniyy* "having a certain ideology"
caql "brain" *caql-iyy* "mental" *caql-aaniyy* "rational or mental".

Thus we have :

maraD caql-iyy "mental diseases"

**maraD caql-aaniyy*

mwaahib caqliyy-at "mental skills"

**mawaahib caql-aaniyy-at*

CHAPTER VII
THE ORDER OF ARABIC ADJECTIVES

7.1 Introduction :

In this Chapter we will discuss the ordering of Arabic adjectives occurring in the same NP or predicatively, looking for generalizations relating to high frequencies of occurrences, and elucidating the Arabic data. The discussion encompasses relevant work by other scholars with a statement of the similarities and differences among their analyses, and between their work and the analysis in this thesis. These differences and similarities are summarized in §7.2. Where the points at issue have already been established in this thesis, the reader will be referred back to the relevant section.

The data show that there are some important generalizations which can be stated with respect to the order of Arabic adjectives either in the same NP or predicatively. The following Tables summarize the statistical results.

The Order of Arabic Attributive Single unmodified Adjectives

(A) Denominal A	Occur- ences	Percent -age	Simple and Participial A	Occur- ences	Percent -age
1. Head N+Den A + verb-like A	177	81	(B) 5. Head N + SimpleA + *Part A	192	27
2. Head N + Simple A + Den A	20	9	6. Head N + Simple A + Simple A	381	55
3. Head N +Participial A +Den A	2	1	(C) 7. Head N + Part A + Simple A	54	8
4. Head N + Den A + Den A	20	9	8. Head N + Part A +P art A	73	10
Total	219		Total	700	

Table (1)

The Order of Arabic Heavy Adjectives

(D) comp-A	Attributive	Occurrences	Percentage
	9. Head N + Single unmodified A + comp-A	140	93
	Predicative		
	10. Head N + Pred. Single unmodified A + Pred. comp-A	9	6
	11. Head N + Pred. comp-A + Pred. Single unmodified A	1	0.7
Total		150	
(E) construct-A	Attributive		
	12. Head N + Single unmodified A + construct-A	42	79
	Predicative		
	13. Head N +Pred. Single unmodified A+Pred. construct-A	10	19
	14. Head N +Pred. construct-A+Pred. Single unmodified A	1	2
Total		53	

Table (2)

The Order of Arabic Predicative Single unmodified Adjectives

Simple and Participial A	Occurrences	Percentage
15. Head N + Simple A + Participial A	24	19
16. Head N + Participial A + Simple A	11	8
17. Head N + Simple A + Simple A	71	54
18. Head N + Participial A + Participial A	25	19
#10. Head N+Pred A+Pred comp-A	(9)	
#13. Head N+Pred A+Pred construct-A	(10)	
Total	131	

Table (3)

Tables (1-2) show that there are five sets of adjective types :

A. Denominal (Table 1)

B. Simple C. Participial (Table 1)

D. comp-A E. construct-A (Table 2)

Table (3) shows that the attributive and predicative occurrences cut across the other variables. Each of the above five types (A-E) occurs according to these two variables, i.e. attributively as well as predicatively, except denominal adjectives which occur only attributively¹. Tables (1-3) display the various sequence types from (1-18) which we will refer to in the course of the discussion in this section. In Table (1), the sequences in (4), (6) and (8) are not of immediate concern for us. Sequence (4) and (8) will not be discussed, however, sequence (6), which involves unmodified Simple adjectives of various semantic types (cf. Colour, Age, Size, Evaluation) will be treated in §7.4.2.4. The other two sequences, i.e. (4) and (8) are irrelevant since they display a sequence of the same type of adjectives in each, i.e. since each contains a head N followed by two instances of the same type of adjectives : in (4), Head N + Denominal A + Denominal A and in (8) Head N + Participial A + Participial A. Another reason for excluding these two types of sequences is related to the fact that they obscure the importance of the ordering preferences shown in the data. Thus, the total number of occurrences of the (A) set, i.e. of denominal adjectives, is 199 (cf. 177+20+2=199) and that of the (B) and (C) sets is 246 (cf. sequence (5) and sequence (7) : 192+54=246. This makes the percentage of sequence (1), i.e. of a denominal adjective preceding a Simple or participial adjective, 89 percent, and that of

sequence (5) 78 percent. Because these sequences seem to be the most frequent they demonstrate the usefulness of working with an adequate data-base, and could not have been mentioned by people not working on data-based occurrences.

The exceptional cases in the (A) set constitute 11 percent, i.e. in 11 percent of the denominal adjective ordering, when they cooccur with other adjectives in the same NP, there is a Simple adjective (10 percent) or a participial adjective (1 percent) preceding the denominal and occurring close to the head N. Therefore, the obvious generalization which has a high frequency and which can be stated with confidence is that when a denominal adjective occurs in a sequence in the same NP it precedes Simple as well as Participial adjectives and occur close to the head N :

- (i) Head N + Denominal A + {Simple A or Participial A}²

It is also important to note that the exceptional cases are related to Simple adjectives (10 percent) much more than to Participial adjectives (1 Percent). The importance of this will become obvious when we discuss the general rule for the adjective ordering in Arabic and note that a sort of a continuum -based on other facts in addition to the one under discussion- can be suggested according to which denominal adjectives occur close to the head N, followed by Simple adjectives, and finally come Participial adjectives; with the extreme two positions (that of the denominal vs that of the participial) being more tied (than the middle position) in obeying the above generalization, since we have only 1 percent of the sequenced occurrences in which a Participial adjective precedes a denominal one.

In sets (B) (cf. 192 occurrences) and (C) (54 occurrences) the total number of adjectives occurring in a sequence in the same NP is 246. Thus, there is a preference of 78 percent in which Simple adjectives precede Participial adjectives (cf. the sequence in 5). However, in 22 percent of the relevant examples we find Participial adjectives preceding Simple adjectives (cf. the sequence in 7)³. Therefore, we can generalize that when Simple and Participial adjectives cooccur in the same NP the former generally precede the latter as in (ii) :

(ii) Head N + Simple A + Participial A

The following points can be stated with respect to generalization (ii) :

1. It complements generalization (i) since it states an important fact about the ordering of the members following the denominal adjectives. Thus it is directly related to generalization (i). Notice that generalization (i) does not predict the ordering of the two members following the denominal adjective.

2. The preference in generalization (ii) is less strong, i.e. the ordering preference of the members in generalization (ii) is not as strong as that in generalization (i). That is, when Simple and Participial adjectives cooccur in the same NP there are more exceptional cases which do not follow generalization (ii) and in which we find Participial adjectives preceding Simple adjectives (22 percent). We will argue that this increase of percentage in the exceptional cases is not random, but rather follows from a more global generalization which divides the adjective positions into two, rather than three, main zones; and which places the more noun-like adjectives (denominal) close to the head N and the more verb-like adjectives (Simple and Participial) further away. If the above is true, it means that there are more exceptional examples within the same main type viz verb-like as in (ii), rather than outside the same type, which provides supporting evidence as to the accuracy of these two main types. This seems to relate the generalizations in (i) and in (ii) to a more general one along the following lines :

(iii) Head N + Noun-like A + Verb-like A

However, so far we provided no proof as to the accuracy of generalization (iii). This will bring into the discussion variables (C) and (D) in Table (2).

In Table (2) there are two types of adjectives viz comp-A and construct-A. They constitute sub-classes of the main class "Heavy Adjectives". A heavy adjective will be defined with respect to some features such as "quantity of words", "syntactic depth of branching nodes", and "inclusion of dominated constituent" (see §7.4.1.1). The

importance of "Heavy" adjectives is related not only to Arabic adjectives occurring in a sequence but also to Arabic "single unmodified" adjectives. Single unmodified adjectives contrast sharply with "Heavy" adjectives (cf. comp-A and construct-A) since they occur without a following complement. On the other hand comp-As and construct-As are characterized by the various features of "heavy" adjectives since they contain more words than the single unmodified adjectives. For more on the Heaviness feature see §7.4.1.1. Comp-A is an adjective which occurs with a complement whereas construct-A is an adjective which occurs as first member in the construct phrase.

The data in Table (2) show that comp-As and construct-As almost always follow single unmodified adjectives whether attributively or predicatively. Ignoring the attributive/predicative distinction, for the moment, and combining the sequences in (9) with those in (10), on one hand, and those in (11) with those in (12), on the other hand, will show that it is possible to derive a very important generalization, close to a rigid-rule. That is, in the four types of sequences (9-10 and 12-13) "Heavy" adjectives, whether comp-A (cf. 99 percent) or construct-A (98 percent), follow single unmodified adjectives. The sequences in (11) and (14) represent the exceptional cases in which a single unmodified adjective follows a "Heavy" adjective, which constitute less than 1 percent⁴. It is important to note that the ordering of adjectives in these two structures (comp-A and construct-A) is not subject to variation since the change of the adjective order may result in ungrammaticality and/or may cause vague structures (see §7.4.1.2). Thus, the simple generalization which can be stated with respect to comp-As and construct-As when occurring in a sequence is as follows :

- (iv) Head N + Single unmodified A + Heavy A⁵

Generalization (iv) shows that there are two main positions : one for single unmodified adjectives, which can be occupied by any "single unmodified adjective including Simple and Participial, when denominal adjectives are absent from the sequence, and the other for "Heavy" adjectives. Notice that in the absence of the denominal adjectives their position

will be left over for any other "single unmodified" adjective, Simple or Participial to occur close to the head N preceding the "heavy" adjective.

But the real challenging question is whether (iv) is related to (iii) and how. That is, the continuum presented in (iii) will be accurate, if we could prove that (iv) is related to (iii) by an independent variable, i.e. by a variable that works in another structure outside the adjective ordering structure. This variable is actually comp-A.

Although the data show that there are more comp-As which do not occur in any sequence, i.e. there are adjectives occurring with complements as the sole modifier of the head noun (cf. 898 occurrences, see Table (5) in 7.3.2)⁶, than those which cooccur with other adjectives (cf. 150 occurrences, see Table 2), this does not reduce the importance of the relevant fact because the 150 occurrences show clearly the generalization stated in (iv). But this brings into the discussion the comp-As which do not occur in any sequence, since they show what types of adjective are potentially "heavy", and thus relate directly to the discussion of adjective complementation, since they are heavy structures. This clearly shows that we are not "killing a fly with a hand-grenade", (cf. Crystal 1971 : 140), since the structure of heavy adjectives is motivated independently from the adjective ordering and neatly divides the Arabic adjectives into three types.

The data show that, in the whole corpus, the most frequent type of adjective that occurs with a following complement is participial adjectives (757 occurrences, 84 percent); then come Simple adjectives (141 occurrences, 16 percent), and finally denominal adjectives, which take no complement. Thus from a quantitative point of view the Participial adjective takes more complements than the Simple adjective and both are in sharp contrast with denominal adjectives (see §7.3.2). We will argue that the participial adjective is more verb-like than the Simple and denominal adjectives because of the following reasons :

1. It takes more complements than the other types.
2. It takes different type of complement. Unlike Simple and denominal adjectives, only Participial adjectives can take accusative object NP (see §5.1.3 and §5.2).

On the other hand, the denominal adjectives are the most noun-like since they, unlike Simple and Participial adjectives, are derived from corresponding noun base (see §6.6,

particularly, §6.6.1 and §6.6.1.1). Moreover, denominal adjectives are distinguished from the other two types (cf. Simple and Participial) with respect to other features related to nominalization, case relations, contrasting structures, and gradability (see Chapter VI §6.1). Other differences are also discussed in Chapter II, particularly in the section §2.3.1, which provides clear evidence as to the difference between these three types of adjectives (denominal, Simple and Participial).

Thus, consideration of the noun-likeness feature seems to divide the three unmodified types into two : denominal adjectives as opposed to Simple and Participial adjectives. Therefore, this feature cannot predict the order of the last two types, i.e. which adjective will immediately follow the denominal adjective (Simple or Participial). On the other hand, consideration of the verb-likeness feature, which contrasts sharply with the noun-likeness feature, shows that it can predict the order of the two types when they cooccur, i.e. when unmodified Simple and Participial adjectives cooccur. The verb-likeness feature predicts that the more verb-like adjective occurs at the end of a sequence further away from the head noun. Participial adjectives are more verb-like than Simple adjective, therefore, they occur at the end of a sequence following Simple adjectives. Simple adjectives are less verb-like than Participial adjectives because the verbs from which they are derived express [state], can be accompanied by [neutral] or [experiencer] participants, cannot have corresponding imperative verb Form I, do not have corresponding passive verb Form I (for more on this see §5.1.3 and §5.2). Participial adjectives are more verb-like than Simple adjectives because the verbs from which they are derived express [action], are accompanied by [agent] participants and have corresponding imperative verb Form I. Participial adjectives derived from transitive verbs are more verb-like since they can take accusative NP complement, the object clitic *-nii* "me" among other differences discussed in §5.1.3 and 5.2.

The point is that there is a continuum from the most noun-like adjectives (denominal) to the most verb-like adjectives (Participial) with Simple adjectives in between. The accuracy of this continuum derives not only from the data on adjectives occurring in sequence but also from data on adjectives which do not occur in sequence.

Heavy adjectives, comp-A and construct-A, which are always more than one word, i.e. heavy, will be discussed in the light of the "Heaviness" principle advocated by a number of scholars such as Bever (1970), Quirk et al (1985), Grosu and Thompson (1977) and Hawkins (1983). We brought into the discussion the single unmodified adjectives since they contrast with the "Heavy" adjectives (cf. comp-A and construct-A). We also mentioned the feature of verb-likeness using it as a cover term that includes both Simple and Participial adjectives, which sharply contrasts with the feature of noun-likeness. The latter feature, i.e. the noun-likeness, will also be discussed in relation to the feature of "noun-likeness" which is suggested in the literature by a number of scholars such as Bever (1970) and Martin (1968).

It is of great importance to note that the above generalizations apply to both predicative and attributive occurrences. However, in some cases particularly with respect to generalization (ii) we find more exceptional cases in the predicative occurrences, i.e. of sequence (16), which includes 11 exceptional examples, than the predicative exceptional cases related to generalization (iv), i.e. sequences (11) and (14), which include a total of only 2 exceptional examples. Consequently, generalization (iv) is attributively as well as predicatively stronger. Another important fact is that, while the exceptional cases in (ii) relate to both attributive and predicative occurrences, those in (iv) relate only to the predicative occurrences. This, if true, means that with respect to all the above generalizations, the attributive occurrences are stronger than the predicative ones since we find more attributive examples obeying these generalizations than their corresponding predicative examples.

The final point which we will address is whether the data show any preference with respect to adjectives occurring within the same zone, particularly Simple, i.e. when various semantic types of Simple adjectives - Size, Colour, Evaluation, etc., cooccur in the same NP or predicatively. The data show that there are some weak tendencies which can be derived with respect to these semantic types⁷. This will bring into the discussion some of the semantic types of adjectives suggested in the literature by some linguists, particularly Dixon (1982). The unmodified Simple adjectives cooccurring with each other, i.e. Head N

+ Simple A + Simple A, will be divided into four semantic types : Size, Colour, Age and Evaluation. It will be noted that the latter type (evaluation) generally appears at the end following the other types. This is not in conflict with the subjective-objective principle found in the literature of English adjective order, which predicts that the more subjective (opinion-like) adjectives occur in the beginning of a sequence. The Arabic adjective order, it will be shown, is the mirror image of the corresponding English (see §7.4.2.4).

It is important to note that the various rules postulated above will be put together in two rules : one employs the heaviness feature and accounts for the order of heavy adjectives and nonheavy ones (cf. single unmodified adjectives), and the other involves only nonheavy adjectives, as shown in (v) and (vi), respectively.

(v) comp-A > construct-A > single unmodified A

The above hierarchy predicts that the heavier the structure, the further it appears from the head noun towards the end of the sequence. It also predicts that comp-As are heavier than construct-As since they allow expansion. That is, the number of words and branching nodes in comp-A is more than that in construct-A since the latter constitutes a unit which cannot be expanded (see the discussion on comp-A and construct-A in §7.4.1.2 and §7.4.1.3, respectively). Both heavy structures are heavier than single unmodified adjectives since they involve more words. However, since the above hierarchy could not predict the order of the various members in its lowest level (denominal, Simple, and Participial) it is argued that another rule is needed. This rule is (vi) which arranges the single unmodified adjectives in a continuum from the most noun-like to the most verb-like.

(vi) Head N + Denominal A + Simple A + Participial A

(vi) predicts that the more noun-like adjectives occur close to the head nouns whereas the more verb-like adjectives occur further away. It also predicts that Simple adjectives are less verb-like than Participial. Therefore they are placed in middle position preceding Participial adjectives and following denominal adjectives (see §7.4.2.2).

7.2 Selected Studies On Adjective Ordering :

There are many studies concerned with adjective order in various languages, particularly English. The following account is not exhaustive but compares the major themes, pointing out their similarities and differences and how they relate to our study. In general this section also shows that little has been done towards an understanding of the Arabic adjective order (see §7.3.1). But before we discuss these themes let us summarize some of the important points that relate to them and note how we differ.

1. The general theoretical frameworks of these studies which employ these adjective types discussed according to these principles range from a functional approach (Bache 1978, Warren 1984 and Teyssier 1968), a semantic-syntactic approach (Quirk 1985), to a purely syntactic (Vendler, Lord and Annear, see §7.2.6), or psycholinguistic (cf. Ney 1983). Notice that this division between these studies is just to simplify the discussion since some of these studies can belong to other various approaches.

2. With respect to the general order of adjectives, scholars generally agree to a certain order which is considered to be somewhat rigid as long as no special stress is used, i.e. there is a main generalization which accounts for the typical ordering of adjectives. Therefore, in the literature, we do not find a suggestion, for example, that in a sequence of adjectives, *wooden*, generally precedes *beautiful*. However, they differ as to the considerations controlling the adjective order, the classes of adjectives they propose, the general theory they follow, and the additional principle/s they invoke in order to account for the exceptions, and the word classes they include in the discussion.

3. There is agreement that the typical order can be changed particularly when accompanied by a comma or stress.

4. They all divide the adjectives into various types (semantic, morphological, etc.) which are assigned to various positions with respect to the modified head N. However they differ with respect to the following points :

- a. Some like Seiler and Dixon include in their analysis of the adjective orderings an account of determiners. Seiler goes further since he applies "determiner" to all the

prenominal elements such as demonstratives, definite/indefinite articles, quantifiers, numerals, etc., as well as adjectives. Therefore, Seiler's set of determination is broader than the typical set, which, of course, excludes adjectives

b. Some analysts focus on certain types over other types. For example, while Dixon focuses on his seven semantic types claiming that they are universal (see 7.2.5), other scholars such as Bache and Quirk, for instance, employ some of Dixon's semantic types of adjectives, but give no prominence to them, since they are not concerned with their universality.

c. Although the studies of Seiler (1976), Bache (1978), Warren (1984) and Teyssier (1968) may be characterized as functional, Seiler differs since his ultimate goal is to show how various "determiners" differ with respect to his "specification"- "characterization" continuum. Therefore, in Seiler's analysis adjectives are discussed as being more "characterizing" and less "specifying", while the other three linguists distinguish between three functional positions (cf. identification + characterization + classification) in which the adjectives are not more or less. However, in the latter studies when adjectives occurring in untypical position, are said that they have changed their function, thereby becoming eligible for the new position (see the discussion on Bache's). They also try to relate the various functions to other phenomena such as broken and unbroken structures (cf. Bache 1978).

5. Since a clear overlap is observed between these types, some scholars bring into the discussion other properties such as inherent vs noninherent, derived vs nonderived, in order to account for the change of normal adjective position (cf. Bache and Quirk). They differ with respect to their definition of inherent vs noninherent (see the discussion on Inherent/Noninherent, in §7.2.4).

6. The basis for these types is generally semantic (cf. Size, Colour, Material, etc.), morphological (cf. derived vs nonderived, deverbal, denominal) or syntactic (cf. coordination, attributive vs predicative etc.).

7. To explain these orderings other principles are suggested such as "subjective/objective" (cf. Quirk 1985, Sussex 1974 and Hetzron 1976), "noun-likeness" (cf. Martin 1969a, Bever, Danks and Glucksberg 1971, Danks and Schwenk 1972, 1974),

(see the discussion on "Noun-likeness" in §7.4.2.1), "Heaviness" as discussed by Bever 1970, Grosu and Thompson 1977, Hawkins 1983), (see the discussion on "Heaviness" in §7.4.1.1).

i. We have no quarrel with these scholars as to the general principle that governs adjective ordering in English but we claim that different adjective classifications must be considered in order to account for the Arabic data, namely Simple, Participial and denominal. These three types occur in Arabic NPs in the following order : Head N + Denominal + Simple + Participial. Although these three major types have corresponding classes in English, there is no unified discussion treating particularly these three types.

We hypothesize that the ability to take a complement is a major determinant of adjective ordering. The above sequence, found in the data, corresponds nicely to the fact that in our data Participial adjectives occur with a complement more frequently than Simple adjectives, which in turn, occur with a complement more frequently than denominal adjectives. Such a syntactic account is absent from the literature on adjective order.

Our account of Arabic adjective order differs from that of other linguists' since we will show that the order of Arabic adjectives depends not just on purely semantic and/or psycholinguistic criteria but also on syntactic ones. We give priority to syntax simply because the strongest rule applying to the data is the one that rests on the complement-taking potentiality of adjectives. Our syntactic account (for Arabic) differs from the transformational account (for English) suggested by a number of linguists which seems to be inadequate (see §7.2.6).

ii. However, when we consider various cooccurring adjectives of the same type, particularly Simple adjectives, i.e. various Simple adjectives modifying the same head N, we will employ the classification found in the literature in particular, the semantic types such as Size, Colour, Evaluation, etc. We will argue that when Simple unmodified adjectives cooccur with other Simple unmodified ones they follow a sort of tendency rather than a strictly ordered sequence. They seem to follow the subjective-objective criteria, however, the Arabic order is the mirror image of the English (see §7.4.2.4).

iii. The concept of "heaviness" as found in the literature for English and other

languages, was not used to account for adjective order, but it will be used here to account for Arabic adjective order. We will generally employ the same criteria for establishing heaviness and will argue that "heavy" adjectives almost always occur further away from the head N, following other Single unmodified adjectives.

iv. Another principle found in the literature which relates directly to our study is the "noun-likeness" criterion which is used by a number of scholars to account for adjective order in English (cf. Martin 1968 and Bever 1970). Although in this study we will employ the same concept, we will modify it to suit the Arabic data. Martin (1968), for instance, defines the "noun-likeness" in terms of some psycholinguistic features. An adjective like *wooden*, for instance, is said to occur close to the head N following other adjectives because it refers to the concrete "inner" structure of the properties of the entity denoted by the modified noun. We do not claim that this is incorrect but we claim that the features which we already established for the Arabic adjectives, independently of the adjective ordering, which are found to account for the adjective orderings, as well, are superior⁸. It will be argued that the modification we suggest, in terms of some syntactic, semantic and morphological features, will make the concept of noun-likeness useful for other Arabic structures not related to the sequencing of Arabic adjectives. In other words, the modified concept of the noun-likeness is needed elsewhere in the grammar of Arabic in order to explain other structural patterns unrelated to the adjective ordering.

These are the differences between this study and other studies of adjective order. We offer our account viz. comp-A > construct-A > single unmodified A, and the noun-likeness verb-likeness continuum as two valid proposals for the Arabic data, which replace other existing proposals found in the literature of adjective ordering.

Although some of the above studies discuss English adjectives with respect to noun-likeness, none of these studies discuss the adjective ordering with respect to verb-likeness. That is, no suggestion is made as to whether the features of noun-likeness vs verb-likeness could be used to account for general adjective order. This constitutes one of the major differences between the above studies and this one. The absence of such a suggestion from the literature on adjective ordering probably arises from the specific nature of adjective

order in Arabic and from the fact that it has not been generally discussed (see §7.3.1). In contrast, these features will be applied here.

Another difference is that while some of these studies take into consideration non-adjectival elements such as *the, a, same*, etc. this study is concerned only with adjectives, particularly the three types found in Arabic, Simple, Participial and denominal.

Another difference relates to the denominal adjectives. While Bache and Quirk et al fail to distinguish morphologically between the various types of denominal adjectives, and describe adjectives like *bony, chemical, hilly*, on one hand, and *peaceful, angry*, on the other, as denominal, we distinguish between the two, treating the former type as nonpredicating, the latter type as predicating (see §6.5). This causes a great deal of confusion in both accounts (see our discussion on Inherent vs Noninherent, in §7.2.4).

Since our study is based on written data from Arabic we try to explain the statistical generalizations and exceptions found in the data without hiding these statistics from the reader. Other scholars either depend on their intuition to judge the adjective ordering (cf. Quirk et al and Bever), or depend on data collected from informants (cf. Ney), or depend on written text which have already been computerized. The written data-based studies such as Dezso (1982) and Bache (1978), do not present any statistical Tables⁹. For instance, Bache's study, which is a whole book written on English adjective ordering, is based on a corpus of 4500 written English examples. He deliberately ignores the statistical frequency of the adjective ordering. In our study we try to relate the statistical frequency found in our data to "some linguistic" explanation. We also try to explain the statistically exceptional cases without hiding these facts.

The rule suggested to account for the adjective ordering, excluding determiners, can be changed when a coordinator such as *and* or a comma is present in the structure. However, in Arabic there are sequences, particularly those related to comp-As and construct-As, where the change of the corresponding order results in unacceptability and/or vague structure. Therefore, it is not always possible to change the order of adjectives even when accompanied by stress. This is an important difference between Arabic and English. Moreover, in English scholars explain the same fact but only with respect to adjectives of

various types (cf. **the same and beautiful ball*). However, our claim is that heavy adjectives always follow single unmodified adjectives disregarding the type of the latter adjective, whether Simple, Participial or denominal.

To clarify the differences and similarities between the accounts of adjective ordering by these linguists consider the following examples :

- 1.a the same handsome English person
- 1.b * the beautiful same wooden ball
- 2.a the attractive tall man
- 2.b the tall, attractive man
- 2.c the tall attractive man
- 3. all these afore-mentioned ⁱten ⁱⁱmarvelous ⁱⁱⁱbeautiful ^{iv}red wooden balls of mine
- 4. a big broken wooden chair
- 5.a an attractive tall man
- 5.b a man that is tall and attractive

The above examples show the following :

1. All the above studies agree that the order in (1.a) cannot be reversed, therefore, (1.b) is ruled out.

2. They generally agree that (2.a) can occur as in (2.b) and such reversed order is allowed by the comma. However, in (2.c) where no comma is placed in the structure it is claimed, particularly by Quirk et al (1985 : 1339) that the general rule is that nonderived adjectives precede derived adjectives, whether deverbal or denominal. Therefore, Quirk et al prefer *tall attractive man* to *attractive tall man*.

3. They all employ some semantic types of adjectives such as Size, Colour, etc., but such semantic types are the end-product only for Dixon. Thus they agree that the general order of the semantic types is Size + Colour + N. Notice that while Dixon includes in his study the semantic types Dimension, Speed and Age, Seiler did not take a note of these

three types and Quirk et al discuss only Dimension adjectives.

4. These linguists generally agree on the order of the adjectives in (3).

5. Denominal adjectives such as that in (3), under (iv), are called Material adjectives by Seiler and are ignored in Dixon's. It is also claimed by Bache and Quirk et al that denominal adjectives can occur in other type zones such as the zone given under (ii). This is because they include different adjectives under the denominal type, which is considered a derived adjective, since they try to distinguish between derived vs nonderived adjectives.

They claim that the general order, as shown in example (4), is :

NONDERIVED + DEVERBAL + DENOMINAL		
big	broken	wooden

Therefore, denominal adjectives are defined morphologically. But notice that this morphological classification of denominal adjective is unfortunate because denominal adjectives have various suffixes. Thus *presidential*, *chemical*, *angry* and *peaceful* are all denominal adjectives according to Bache and Quirk. However, the first two viz, *presidential* and *chemical*, differ from the last two with respect to the position they would occupy when occurring in a sequence. But the latter two adjectives are also considered central adjectives satisfying all the criterial features of central adjectives. We suggest that the distinction between predicating/nonpredicating as discussed in Chapter VI in §6.5 is superior since it solves the problem relating to the morphological distinction of English denominal adjectives.

6. We differ from the functional approach found in the literature. This approach will not be followed because even those who advocate a functional analysis admit that their functional types are not strongly distinctive, and they allow the same adjective to have various functions (see the discussion on Bache's).

7. Ney differs from others in concluding his study by what he calls "length constraint". Ney remarks that when the number of adjectives modifying the same head noun is more than three the general rule accounting for their order is relaxed. Ney's proposal does not apply directly to Arabic since our data show that there are some orderings, particularly those related to comp-As and construct-As, which follow the same

order whether the sequence of cooccurring adjectives is long or short, i.e. whether there are two adjectives or more modifying the same head noun.

8. It is claimed by some linguists, particularly Quirk et al (1985 : 1341) that the order of the premodifying adjectives, as in (5.a) is the inverse of the predicative order as in (5.b). That is, the order of attributive English adjectives differs from the predicative one. This may be due to the fact that the attributive/predicative word order in English is different¹⁰. That is, while in the prenominal structure the head N *man* follows the modifier/s, in the predicative structure it precedes. It is also claimed by a number of linguists that the constraints on adjective ordering apply only to prenominal English adjectives. Postposed adjective structures are found to be marked, and when more than one postposed adjective occur they are connected with a coordinator (Wold : 1982). On the other hand, English predicative adjectives are thought to vary in their linear ordering (cf. Bever 1974).

Our claim differs from this proposal since we will argue that the same adjective orders found in the attributive structures can be extended to the predicative structures, though with less frequency. This is probably due to the fact that Arabic differs from English in that the modified head N in both cases (attributive and predicative) precedes the modifying adjective/s (see §7.3.1).

9. Some linguists such as Quirk et al observe that the order of a central adjective cooccurring with another central adjective, particularly, the nonderived ones, is relative rather than absolute (see the discussion on Quirk et al §7.2.2). The same is found in Arabic. That is, Arabic single unmodified Simple adjectives cooccurring with one another follow a general tendency rather than an absolute rule (see the discussion on Simple adjectives in §7.4.2.4).

Having summarized the general points of the above studies and how we differ from them we now turn to these studies which can be generally divided into semantic, functional and syntactic though this distinction is not rigid¹¹.

7.2.1 Bache (1978) :

Bache studies the order of premodifying adjectives in present-day English, collecting 4500 written examples from fiction and non-fiction. His purpose is to account for what he calls 'Poly-adjectival Nominal Phrases' (PNP) in English. His examples include central adjectives, peripheral adjectives (Denominal and participial) as well as some attributive nouns (cf. Bache 1978 : 15). Most of his material, as he states (cf. page 15), is single unmodified, i.e. not compound, as opposed to our study in which we have single unmodified adjectives and heavy adjectives.

He divides the English modifiers into three zones : Mod.I which includes items such as *first, same* etc. and which occurs further away from the head N. Then comes Mod.II which includes central and participial adjectives, followed by Mod.III which includes peripheral adjectives such as the denominal adjectives and which occurs close to the modified head N.

In explaining the sequential order of premodifying adjectives in English Bache (1978 : 18) observes that there are three features which constitute an important dimension of his framework, which is relevant to our discussion of the Arabic data, particularly when Simple adjectives cooccur in the same NP (see 7.4.2.4). His scheme can be represented as follows :

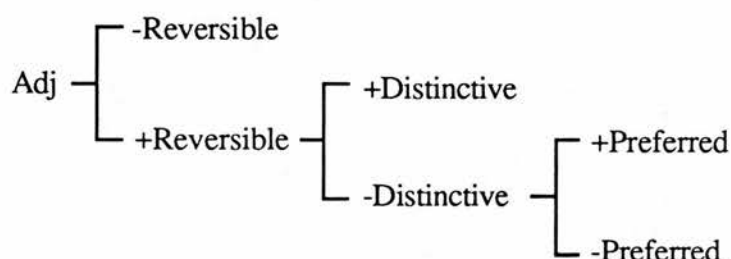


Figure (1)

For example, the ordering in (6.a) is [-reversible], therefore, (6.b) is not acceptable. When an order is reversed without the comma, the order is [+Distinctive], as in (7.a), i.e. it is associated with a definite semantic meaning. On the other hand, when a comma is present the order is [-Distinctive], as in (7.b), in addition to being either [+preferred], as in

(7.b), or [-preferred], as in (8).

- | | | |
|-----|---------------------------------|---|
| 6.a | The same beautiful wooden ball | [-Reversible] |
| 6.b | *The beautiful same wooden ball | |
| 7.a | a tall attractive man | [+Reversible], [+Distinctive], [+preferred] |
| 7.b | an attractive, tall man | [+Reversible], [-Distinctive], [+preferred] |
| 8.a | a flat wet cold | [+Reversible], [-Distinctive], [-preferred] |
| 8.b | a cold wet flat | |

Notice that we cannot simply restrict the order of adjectives to the first feature in the above system [\pm Reversible] and ignore the other two features, because native speakers make such choices in the assignment of adjectives to the noun phrase. It follows that when native speakers wish to make the concept of *Sigar* "smallness", in (9.a), for example, the primary characteristic of the bracketed noun phrase containing the adjectives *Sagiir* "small" and *jamiil* "beautiful", they will produce (9.a). However, if the same native speakers wish to make the concept of *jamaal* "beauty" the primary characteristic of the same noun phrase containing the same adjectives, they will produce (9.b). In other words, although the order in (9) is [+Reversible] it is [+Distinctive] since there is a distinction between the interpretation of (9.a) and that of (9.b).

- 9.a wa huwa [xaTT-un Sagiirun jamiilun] yufbihi xaTTa-hu
 and it handwriting small beautiful resembles handwriting-her
 "And it is a beautiful small handwriting (which) resembles her
 handwriting". (J102)
- 9.b wa huwa [xaTT-un jamiil-un Sagiir-un] yufbihi xaTTa-hu

In accounting for the order of prenominal adjectives in English Bache proposed a three 'Mod-zone' system which determines the place of an adjective in a sequence depending on whether the structure is broken or unbroken¹². The distribution of broken and unbroken

sequences provides evidence for the division of adjectives into three Mod.-zones¹³. Broken structures are defined as those in which "two or more adjectives are separated by comma(s) and/or conjunction(s) (*and, or, but* etc.)" (cf. Bache1978 : 20), in contrast to unbroken structures in which adjectives are not separated by comma or conjunction. Bache also notes that adjectives in broken constructions separately modify the head of the construction whereas between unbroken adjectives there seems to be a hypotactic relationship since they cannot be coordinately conjoined, overtly by the formal indicator of parataxis, such as *and* (cf. Bache1978 : 21). Thus broken vs unbroken constructions can be represented as follows :

(A.) + (A.) + (A.) Head	broken
(A. (A. (A. Head))))	unbroken

Therefore (10.a) and (10.b) are unacceptable whereas (10.c) is acceptable.

10.a *The same beautiful and wooden ball

10.b *The same, beautiful wooden ball

10.c The dark and frowning faces

Examples (10.a) and (10.b) show that the presence of a comma or a coordinator such as *and* between the unbroken structures results in unacceptability, therefore, the corresponding types of adjectives belong to different type of Mod. zones. On the other hand, the broken structure, in (10.c) shows that the corresponding adjectives belong to the same Mod. zone.

Bache (1978 : 29-32) observes that Mod. I-adjectives (*same, entire*) are peripheral adjectives, therefore, they cannot be coordinated with Mod. II-adjectives, cannot be modified by intensifiers and cannot occur predicatively. They semantically 'define' or 'specify' rather than describe and thus often support and extend the function of determiner. Unlike Mod. I adjectives, Mod. II adjectives (*big, beautiful*) are regarded by Bache (1978 :

34) as central adjectives since they can be compared, occur predicatively, semantically they 'describe or characterize rather than define or specify the head of the construction and usually have antonyms. Like most Mod. I adjectives, Mod. III adjectives (*wooden, presidential*) cannot be coordinated with Mod. II adjectives by *and* nor can they be compared. They occur attributively and mainly categorize rather than describe as noted by Bache (1978 : 36-37) :

"they lend themselves more readily to attribution than to predication [...] Semantically Mod III adjectives categorize or classify rather than merely describe what follows in the PNP, and thus extend the nominal function of the head."

Although the order of cooccurring adjectives in Bache's analysis seems to be strict it is important to note that Bache always maintains that the order of adjectives is treated in functional terms rather than in rigid order classes¹⁴. Bache summarizes his three Mod. zones and their characteristics in the following Table :

Function	Definition	General Characteristics	Traditional Order Classes
Mod. I	Adjectives preceding a broken sequence	Peripheral adjectives which identify, specify	Post-determiners Numerals Compared forms Other Adjectives
Mod. II	Adjectives occurring in a broken sequence	Central Adjectives which describe, characterize	Quality Size Height Form Age etc. Other Adjectives
Mod. III	Adjectives preceded by a broken sequence	Peripheral adjectives which classify, categorize	Nominal Denominal Deverbal Nationality Colour little, old, young Other Adjectives

Table (4)

The above Table shows that Bache's includes denominal, deverbal, and colour adjectives in his Mod.III adjectives. This clearly shows that the distinction derived earlier by Bache between these Mod. types are only based on some typical examples. More on this

will be said when we discuss how he includes his inherent vs noninherent distinction.

It must be noted that Bache (1978 : 26) divides the cooccurring adjectives into three Mod.-zones according to their position in broken or unbroken sequences. To justify the occurrence of an adjective outside its zone Bache (1978 : 25) observes that there are four main subclasses, as exemplified in (11).

(11)

- a. a small, clear, penetrating voice
- b. long and detailed letters
- c. the ^{Mod. I} same ^{Mod. II} relaxed , enjoying look
- d. their ^{Mod. II} brave and ^{Mod. III} sexless little voice
- e. the ^{Mod. I} old mortal , ^{Mod. II} helpless , ^{Mod. III} time-terrified human feeling

In (11) the solid lines represent unbroken constructions and the broken lines represent broken constructions. (11.a) and (11.b) show the constructions in which all adjectives are separated by comma or conjunction. The construction in (11.c) shows that the first adjective in a broken sequence is the last adjective in an unbroken sequence viz *relaxed*. That is, modificational zone (Mod I) comprises non-separated adjectives which appear before a broken sequence. The construction in (11.d) shows that the last adjective in a broken sequence is the first adjective in an unbroken sequence viz *sexless*. Thus Mod. II adjectives enter into a broken sequence whereas Mod. III adjectives, as in (11.e) in which the first and the last adjectives of a broken sequence are members of unbroken sequences.

Bach discussed the examples in (11) to show that the boundaries between broken and unbroken structures are not rigid¹⁵. This will allow Bache, as he claims, to account for the occurrence of adjectives outside their generally preferred original zones. Notice that this will also allow Mod.III adjectives, for instance to occur in Mod.II adjective, a result favoured by Bache.

Thus one and the same adjective may be assigned to more than one Mod. zone, one and the same adjective can occur in different positions. Although Bache welcomes this result, it

causes a problem for the association he establishes between the preferred position which is generally found in his data and "inherent" and the unpreferred position which is also found in his data but infrequent, and "noninherent" (see Inherent vs Noninherent, in §7.2.4).

To show how Bache proves the distinctions in (11) we must consider his system of broken vs unbroken, which he divides as follows :

Broken :

distributive, as exemplified in (12)

non-distributive, as exemplified in (13)

Unbroken :

non-distributive, as exemplified in (14)

To account for the examples in (11) Bache divides the broken construction into distributive and non-distributive. He also analyzes the unbroken construction as non-distributive. In other words both broken and nonbroken can be non-distributive. To prove the point, he observes that in the broken distributive construction of (12.a) the underlined items refer to separate entities expressed by the head noun *leaders*. Therefore, (12.a) does not conform to his formula : HEAD (,) relative pronoun BE both ADJ and ADJ. Therefore (12.b), as interpreted in (12.c) is unacceptable. In other words we cannot say **Leaders which are both west European and Japanese*.

12.a West European and Japanese leaders

12.b *Leaders which are both west European and Japanese

12.c *West European Leaders_k vs Japanese leaders_k

13.a a slow, appreciative smile

13.b A smile which is both slow and appreciative.

13.c slow smile_i appreciative smile_i

On the other hand, in a Broken non-distributive construction, as in (13), the adjectives refer to the same entity or entities. Therefore, both (13.b) and (13.c) are acceptable. However, Bache (1978 : 23) observes that the adjectives in unbroken constructions, unlike

those in broken construction, are ambiguous since they may refer to either the same entity or entities expressed by the head of the construction (parataxis) or to the entity or entities expressed by the following adjective(s) + the head (hypotactic). Unbroken construction are thus non-distributive, though they form a heterogeneous class of non-distributive constructions and do not always conform to the above formula (cf. Bache 1978 : 24). The following are examples of his unbroken non-distributive constructions :

- 14.a red and white flags.
- 14.b Flags which are both red and white.
- 14.c Red flags_i and white flags_k

In (14.a) the adjectives may refer to either the same entity or entities expressed by the head *flag*, as in (14.b) or they may refer to separate entity or entities as in (14.c).

When he finds in his data examples like (15.a) in which the Mod II adjective *wild* follows the Mod.III adjective *Australian*, he claims that *wild* in this structure is noninherent Mod.III adjective. That is, when a central adjective like *wild* follows a peripheral adjective like *Australian*, without the presence of a comma, it is claimed that the former is noninherent Mod.III. However, the reversed order as in (15.b) would cause the noninherent Mod.III adjective to change its zone and becomes inherent Mod.II¹⁶.

This is not an adequate explanation because the inherent vs noninherent distinction is brought only to distinguish between the generally preferred order that occur in Bache's data (cf.15.a) and the unpreferred order in (15.b). Therefore, rather than simply admitting that (15.b) is an exceptional example Bache complicates his account by bringing an unnecessary feature.

- 15.a Australian wild birds¹⁷
- 15.b wild Australian bird

Bache contradicts himself when earlier, (pages 15-20) and particularly in his Table, which is not numbered, on page 42 (which corresponds to Table (4), above), he placed the

denominal adjectives in Mod.III and later observes that they are Mod II adjectives. However, on page 69 he distinguishes between two types of the Mod.II adjectives : derived and underived, further dividing the former into deverbal (cf. *broken, interesting, relaxed*, etc.) and denominal (cf. *hilly, chemical, presidential, bony, horrible, terrible*). These examples cited by Bache show that there is a clear difference between *hilly, chemical, presidential*, and , *bony*, on one hand, and *horrible* and *terrible*, on the other hand, since the former do not accept modification by intensifiers such as *very*¹⁸. This clearly shows that the members within his denominal type vary greatly.

Finally it must be noted that there is one important observation made by Bache which relates directly to the Arabic data. Bache (1978 : 61) notes that the order found in his data with respect to Mod.III adjectives is as follows :

- 1 2 3 4 5
- (i) Derived + Colour + Nationality + Denominal + Nominal + Head N

He gives the following examples for each type :

- 1 leading, sleeping, internalized, recognized, susceptible, hypnotizable
- 2 Adjective denoting colour
3. Adjectives denoting nationality
4. Other denominal adjectives like industrial, presidential, nuclear, woollen, medical
5. Nominal attributives such as *desert* rats.

Bache did not find an example that includes all these five types but he gives various examples which collectively lead to the above postulated order, cf. (16) :

- | | |
|---|-------|
| 16.a a retired Indian judge | 1+3 |
| 16.b white American men and women | 2+3 |
| 16.c her pink woollen Dior | 2+4 |
| 16.d the increasing Russian military strength | 1+3+5 |
| 16.e a yellow silk handkerchief | 2+5 |

From these examples we can reconstruct the following sequence :

16.f The recognized white American nuclear desert facilities

The sequence in (16.f) is the closest we found in the literature that corresponds to our verb-likeness vs noun-likeness sequence. That is, the above sequence in (16.f) shows that the adjectives are ordered from the most verb-like to the most noun-like. In (i), above, type (5) is actually a noun as opposed to type (1) which is a participial adjective, which is followed by the central adjective *white* and then comes the denominal adjectives *American* and *nuclear*. However, such an explanation is not found in Bache's, or in any other studies reviewed by the author, simply because the order of English adjectives does not follow this continuum¹⁹. This is because of the fact that in the above sequence in (i) the nonderived Colour adjectives follow the derived deverbal adjectives, i.e. the order is as stated in (i) Derived+ Colour. However, when we consider other nonderived adjectives such as *long* or *tall*, we find them preceding the derived adjectives as in *a tall retired man*. In other words, we cannot generalize that the derived verb-like adjectives precede the nonderived adjectives such as *tall*.

7.2.2 Quirk et al (1972 and 1985) :

Quirk et al (1985 : 437) maintain that "the order of adjectives is to a large extent determined by their semantic properties". Quirk and his colleagues (1972 : 267) suggest the following semantic "sets" to account for the same phenomenon (sets of adjectives are listed in order of distance from the noun) :

- a. intensifying adjectives (e.g., *real*, *perfect*),
- b. post determiners, including restrictive adjectives (e.g., *both*, *only*),
- c. general adjective susceptible to subjective measure (e.g., *careful*, *lovely*, *naughty*),
- d. general adjectives susceptible to objective measure, including those denoting size or shape (e.g., *wealthy*, *square*, *large*),

- e. adjectives denoting age,
- f. adjectives denoting colour,
- g. denominal adjectives (e.g., *wooden, metallic*), and
- h. denominal adjectives denoting provenance or style (e.g., *American, Chinese*)

In the 1985 edition Quirk et al provide a different classification of the cooccurring adjectives in English, dividing the adjectives into four different Zones on the basis of their syntactic and semantic characteristics²⁰ (cf. 1985 : 437, 1338) . Thus between the determiner and the head noun the adjectives are divided as follows :

Det	I	II	III	IV	Head
a	major	new	customized	financial	service

(I) Peripheral nongradable adjectives belong to Zone I (Precentral) which includes :

- a. emphasizers, e.g. *definite, certain, pure, plain*
- b. amplifiers, e.g. *entire, absolute, extreme*
- c. downtoners, e.g. *feeble, slight*

(II) Zone II includes the central adjectives which satisfy the various criteria for adjectives (attributive and predicative occurrences, premodification by *very* , and comparison). Quirk et al (1985 : 1338) observe that adjectives in this group are typically inherent and include both nonderived adjectives (*good, cold, small, nice* etc.) and derived adjectives which are either deverbal (like , *interesting, exciting*) or "denominal" (like *peaceful, angry, rainy*)". Such a morphological classification of the adjectives in this Zone is claimed to affect the order of the adjectives occurring in this zone viz. NONDERIVED + DEVERBAL + DENOMINAL. This is exactly the same order suggested by Bache (1978 : 69) who divides his Mod.II adjectives into the same three sub-groups. However, Bache goes further and observes that when the derived adjectives occur in this zone they are noninherent²¹.

Quirk et al remark that the adjectives denoting Size, Length and Height normally precede other nonderived adjectives. Moreover, Quirk et al also suggest that emotive adjectives like *wonderful, nice, lovely*, etc., should precede other central adjectives. Thus they prefer *wonderful long hair* to *long wonderful hair*.

Another class of Zone II adjectives can be distinguished, namely that denoting emotive, evaluative, or subjective adjectives such as *beautiful, nasty, terrible, nice*, etc, which usually have corresponding *-ly* adverb. This class of adjectives often precedes other central adjectives (cf. Quirk et al 1985 : 1339). Therefore, *wonderful long hair* is preferred to *long wonderful hair*.

It should be noted that the ordering of adjectives in Zone II is problematic (cf. Whorf 1945 and Quirk et al 1985 : 1339). Quirk et al remark that :

"The statements made about the relative order of zone II premodifiers should however be understood to be tendencies rather than absolute rules".

This is the same result found in Arabic, i.e. Arabic Simple (cf. central) adjectives with various semantic types follow a general tendency rather than a rule (see §7.4.2.4).

(III) Zone III adjectives include participles and colour adjectives with variable order as shown in the examples :

- 17.a his thinning grey hair
- 17.b their dark frowning brows

Quirk et al observe that zone IV adjectives include the "least adjectival and most nominal premodifiers". In zone IV the adjectives are peripheral including

- a. nationality adjectives *Arabian, American*,
- b. morphologically related to nouns adjectives, *musical, Presidential, wooden*,
- c. nouns

Members in this zone generally cannot be coordinated **local and student associations*. Notice the vagueness in the identification of the adjectives in (b) which are identified as

morphologically related to nouns. However, earlier Quirk et al identify adjectives like *peaceful*, *angry* and *rainy* as derived adjectives and call them denominal. Notice further that both, adjectives like those in (b) *wooden* or *presidential*, on the one hand, and adjectives like *peaceful* or *angry*, on the other hand, are derived and are related to nouns, however, the former cannot occur predicatively while the latter can. This shows that the morphological distinction established is not clear. This problem relates to the morphology of denominal adjectives in English and in other languages such as Polish and Russian (see §6.3.1 and §6.3.2, respectively). In English, for example, denominal adjectives have various suffixes which complicate the morphological distinction between what is considered central adjective (*angry*, *peaceful*) and what is considered peripheral (*wooden*, *presidential*). For this reason we proposed the predicating/nonpredicating distinction, which takes into consideration other syntactic and semantic features. For more on this see §6.5. Therefore, the morphological distinction brought by Quirk is inadequate. The same could be stated about the same distinction suggested by Bache (for more on this see the discussion of Inherent vs Noninherent, in §7.2.4)

Although English cooccurring adjectives generally follow the above order, Quirk et al suggest one general principle according to which "objective" adjectives occur close to the head N while "opinion-like" ones occur further away. To quote,

"We suggest one principle accounting for all premodifiers : a subjective/objective polarity. That is, modifiers relating properties which are (relatively) inherent in the head of the noun phrase, visually observable, and objectively recognizable or assessable, will tend to be placed nearer to the head and be preceded by modifiers concerned with what is relatively a matter of opinion, imposed on the head by the observer, not visually observed, and only subjectively assessable".

Thus the opinion-like adjectives are generally placed farther away from the head noun²². They also claim that "emotive" adjectives such as *wonderful* generally occur further away from the modified head N²³. A similar argument is found in Sussex (1974 : 115), and Hetzron (1974 and 1976). Hetzron (1976 : 178), for instance, accounts for

adjective ordering, by considering English and Hungarian, in terms of subjective-objective gradience and observes that "the major rule is to place the more objective and undisputable qualifications closer to the noun, and the more subjective, opinion-like ones farther away".

Hetzron is aware that this principle is not absolute, and suggests that the distinction is "relative". (We will see how this is important in the analysis of Arabic adjectives in §7.4.2.4). Hetzron's contribution is related to the "speech act" discussed in Seiler's continuum of 'determination', which we will consider in the following section.

7.2.3 Seiler (1976) :

Seiler (1978), analyzing German in order to find what universal aspects of 'determination' are reflected in this language, proposes two rules based on the idea of gradience which then could cover the entire phenomenon in order to account for the sequence of "determiners" in examples like : *alle diese meine erwahnten zehn schonen roten holzernen kugeln* (*all these afore-mentioned ten pretty red wooden balls of mine*). Seiler claims that the scope of a "determiner" increases with greater distance from the head N. Another claim is that those properties implied in the concept of the head N tend to stand closer to the head N. We will not discuss Seiler's because his study differs from this study. In this study the class of adjectives is identified as such rather than as "determiners", a term which is typically realized by a set of closed-class items, such as *a, an, the* etc., which are used to determine the reference of the noun. Moreover, While Seiler's continuum includes many constituents that belong to various word classes brought together by various functions, our continuum includes only the class of adjectives which is divided into central (Simple adjectives) and peripheral (denominal and Participial adjectives), and which are brought together by syntactic, semantic and morphological features. Since these features relate to certain types of adjectives in specific positions in the continuum, they are kept separate from the continuum, although they are related to the members included in the various positions. Seiler, on the other hand, brings all the various variables into play

moving them all, along his continuum, simultaneously, which makes his account more complicated.

7.2.4 Inherent vs Noninherent :

Worf (1945), Strang (1962 : 121) and Bache (1978 : 68-69) differ in their use of the terms "inherent vs non-inherent" from Rusiecki (1985 : 2) and from Quirk et al (1985 : 435)²⁴.

Bache is puzzled by the fact that some adjectives, which he calls "deverbal" and "denominal", e.g. *interesting*, and *rainy*, respectively, occur within the same zone, i.e. his Mod. II zone. Therefore, he, like Quirk, divides this zone into three sub-groups which occur according to the order : NONDERIVED + DEVERBAL + DENOMINAL. However, unlike Quirk, Bache observes that since Mod II includes various adjectives which actually belong to other Mod. zones, i.e. his Mod.I and Mod.III, he tried to bring into the discussion the terms "inherent" vs "noninherent". But notice that Bache divides his Mod.II adjectives into NONDERIVED vs DERIVED and identifies those adjectives occurring in this zone as "inherent" as opposed to those adjectives occurring in either zone I or zone III which he calls "noninherent"²⁵. Thus the same adjective which belongs to Mod.II when occurring outside Mod. II is noninherent while in Mod.II inherent. (see the discussion on Bache's in §7.2.1). To clarify this point we will show how Bache employs the inherent vs noninherent distinction in his system.

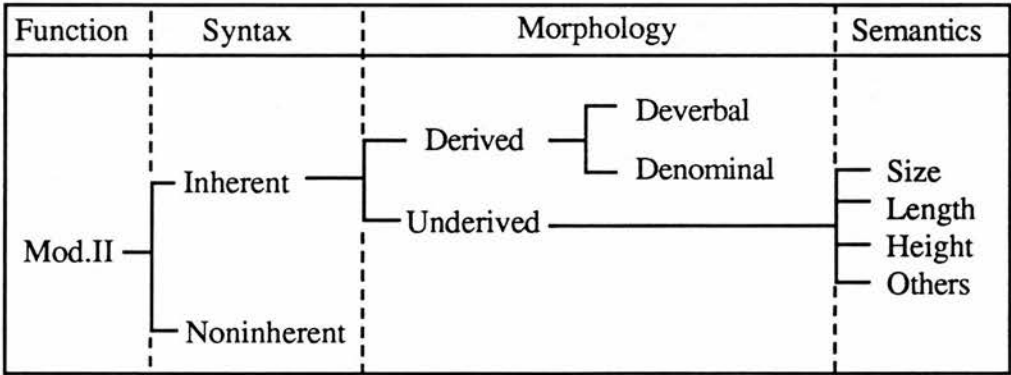


Figure (2)

Bache (1978 : 69) claims that the first filter is functional which accepts only those adjectives which in specific instances function as Mod. II-adjectives. According to syntactic potentiality these adjectives are either inherent or non-inherent Mod. II-adjectives (inherent Mod. I- or Mod. III-adjectives). Inherent Mod. II-adjectives are then treated in morphological terms as either derived or underived Mod. II-adjectives. The class of derived Mod. II-adjectives comprises two fairly distinct morphological subclasses : deverbal and denominal Mod.II adjectives, whereas the class of underived Mod. II-adjectives comprises four semantic subclasses.

Notice that Bache's system cannot distinguish between what he calls "non-inherent Mod. II adjectives" and inherent Mod.I and Mod.III adjectives. Therefore, Bache (1978 : 70) observes that "a distinction between inherent Mod. I and inherent Mod. III-adjectives functioning in Mod. II can only be established on the basis of the general functional potential of the adjectives since the general syntactic characteristics are likely to be identical". This clearly shows that the inherent vs noninherent distinction brought by Bache is not serving the purpose since a distinction between noninherent Mod.II adjectives such as *rainy* or *peaceful* is not valid because they are also inherent Mod.III adjectives.

On the other hand, although Quirk et al relate the term "inherent" to those adjectives which typically appear in their zone II, they did not try to distinguish between the various sub-groups which they found occurring in this zone with respect to inherent vs noninherent. Therefore, Quirk et al did not concern themselves with the fact that "noninherent" adjectives, in the sense of Bache, typically occur outside their zone.

For Quirk et al "when adjectives characterize the referent of the noun directly, their use is called INHERENT. When they do not, it is called NONINHERENT" (Quirk et al 1985 : 435). The importance of this distinction is that noninherent adjectives occur only attributively (Rusiecki 1985 : 2). Most adjectives, according to Quirk et al are inherent since they characterize the referent of the noun directly. For instance the inherent adjective *wooden chair* applies directly to the referent of the object, i.e. *a wooden chair* is also a wooden object. However, the same adjective in *wooden actor* is noninherent since a *wooden actor* is not *a wooden man* . Some other similar examples are :

	INHERENT	NONINHERENT
18.a	a firm hit	a firm brother
18.b	a perfect report	a perfect stranger
18.c	a true story	a true researcher

A noun modified by a noninherent adjective is seen as an "extension of the basic sense of the noun" (cf. Quirk 1985 : 435). Thus *a firm brother* is a brother whose brotherhood is firm, and *a perfect stranger* is a stranger who is perfectly strange. Quirk et al (1985 : 436) also remark that if the adjective is inherent, it is often possible to derive a noun from it. Thus we can have the following pairs :

19.a	a perfect report	the perfectness of the report
19.b	a perfect stranger	*the perfectness of the stranger
19.c	a true story	the truth of the story
19.d	a true researcher	*the truth of the researcher

However, there are exceptions to this generalization since there are examples like
the wooden actor the woodenness of the actor

7.2.5 Dixon :

Dixon (1982) studies various languages and proposes the following classification of adjectives which are ordered below from left to right according to Dixon's observations :

A . Pre-adjectival modifiers : logic qualifiers (*all, some*), determiners (*the, this*), possessives (*my, his*), superlatives (*best, cleverest*), ordinal numbers (*second*), cardinal numbers (*three*) etc.

B . Adjectives : Cooccurring adjectives appear in the following order :

I	VALUE	(beautiful, delicious, bad)
II	DIMENSION	(small, big, wide)
III	PHYSICAL PROPERTY	(cold, hot, sweet)
IV	SPEED	(slow, fast)

- V HUMAN PROPENSITY (wicked, rude, clever, jealous, sad)
- VI AGE (young, new)
- VII COLOUR (red, black)

C. Post-adjectival modifiers : origin/composition (*English, wooden*) or purpose/beneficiary (*cooking in cooking utensil*)

Dixon (1982 : 26) in a footnote remarks that when the items in (B) cooccur, they appear in the above order not only in English but also in other languages such as Hungarian and Telugu²⁶.

Although Dixon's system seems more detailed than other systems, it does not include all types of adjectives²⁷. This is because Dixon is interested only in the surface exponents of what he considers adjectival concepts on a universal semantic level. Therefore, adjectives like *worried* or *interesting* are excluded since they are originally a verbal concept. Similarly denominal adjectives such as *musical* or *healthy*, for instance, are excluded since, for him, they are nominal concepts. Such exclusion of some types of adjectives seems natural for a study which is concerned with the types of adjectives in various languages rather than with the order of cooccurring adjectives in a single language. In our study we include such adjectives because in a detailed study of cooccurring adjectives they have to be taken into account if they occur in the data. But our study differs from Dixon's in the same way it differs from Seiler's and others since we are not concerned with elements such as determiners, possessive pronouns, numerals etc., which are included in Dixon's pre-adjectival type. Moreover, Dixon's types can be further refined. The 'Dimension' adjectives can be divided into Size-Height/Length-Width-Thickness, in order to account for the ordering of adjectives in a sequence such as *a long wide narrow thin blade* (as in Quirk et al's and Bache's). Dixon's remark that when the order of two adjectives is interchangeable, they must belong to the same category is welcomed²⁸.

7.2.6 Vendler (1968), Annear (1964) and Lord (1970) :

To account for the adjective ordering several studies in Transformational Generative Grammar have been produced (cf. Vendler 1968, Annear 1964, Lord 1971). In all these studies attempts have been made to define the correlation between formal- semantic classes and transformational operations²⁹.

Vendler, for instance, investigated the order of prenominal adjectives in English in a transformational approach and argued that the adjectives in a given class can be grouped together by means of being introduced by the same transformation. Thus, the adjective *red* and *large* in the noun phrases *the red chair*, and *the large chair* were said to be produced through the application of different transformations to different deep structures:

the red chair DS : the chair is red,

Rule: N is A --> AN

the large chair DS : the chair is large for a chair,

Rule: N is A for N --> AN

The ordering of adjectives is then explained in terms of a postulated ordering of transformations. The transformation producing *red* is applied before the one introducing *large*, since it is less complicated.

The transformational account for the adjective ordering is inadequate for the following reasons:

- a. The derivation of many attributive-only adjectives is impossible since they do not occur predicatively. Adjectives like, *a chemical engineer*, *a rural police*, cannot be derived from their corresponding predicative : **an engineer is chemical*, **a police is rural* (for more on this see Chapter VI §6.4).
- b. Only one kind of transformation is required for introducing all the adjectives. Thus we have only one rule: N is A --> AN.
- c. There is no support presented for the postulated ordering of transformation other than the ordering of adjectives, therefore, the argument is circular and lacks a

rationale for the structure it describes. Vendler, for example, is rather following Lees (1960) in justifying transformations on the grounds of plausibility. That is, the postulated adjective classes are not useful in the explanation of any other linguistic phenomena than adjective ordering. Therefore, Annear concluded that a nonsyntactic account of adjective order may be possible.

- d. Although Lord (1970) tried to account for the order of adjective classes by increasing transformational complexity -the more complex ones are given high scores- according to which adjectives farther away from the noun are generated by more complex transformations he states in his conclusion that "the method of scoring the various classes of adjectives needs some further development, which would reduce the number of failed scores". (cf. Lord 1970 : 68).

The above discussion shows that the transformational account of adjective ordering is inadequate and the semantic account as discussed above is superior. Now we turn to the psycholinguistic account.

7.2.7 Ney (1983) :

Ney's study is characterized by some psycholinguistic results which is based on three questionnaires involving the following :

- a. whether the order of adjectives is semantically based
- b. whether the order follows a rigid sequencing rules
- c. whether there is a relation between frequency of occurrence (obtained from other studies of word frequency in general : Kucera and Francis 1967, Thorndike 1944) and ordering of prenominal adjectives.

To test these hypotheses, three questionnaires were designed so as to allow a choice between alternative orders (A and B) of modifiers from a set of noun phrases containing various adjectives³⁰. The statistical analysis of Ney's data is interpreted as showing "three processes at work in the selection of the order of adjectives in the noun phrase" (cf. Ney 1983 : 103) :

1. habit strength
2. rule governed ordering
3. length constraints

Ney claims that the first 'process' accounts for what he calls 'stock phrases' such as *little old man*, whereas the second 'process' indicates "that all rules are subject to violation by native speakers"³¹. Ney (1983 : 103) observes that :

"native speakers can, at any time, choose orders for adjectives that do not conform to the dominant orders. They can do this to express differing meanings or to capture stylistic variants. Thus because native speakers can optionally choose different orderings of the adjectives, all rules are variable."

It is interesting to note that Ney's result which is based on English data collected from informants, show the same result we found in our Arabic data collected from informants. In the very early stage of this research we designed a questionnaire in order to collect data from Arabic informants. The questionnaire includes Simple adjectives of various semantic types. The informants were third year college students, in the university of Umm Al-Qura, in Makkah. Our result shows that native speakers of Arabic can choose any order of adjectives which may not correspond to the frequent or normal order. That is, the preferences given by the informants are very low. This probably shows that when central adjectives (Simple adjective) occur in a sequence modifying the same head noun the rule that governs their order is relaxed since they belong to the same type, i.e. Simple adjectives³².

Although Ney may be correct to some extent, since it is true that native speakers can modify the language structure in order to indicate certain meanings, I do not think that I can agree completely with Ney³³. This is because Arabic has certain adjective ordering which must be observed, if ungrammaticality or ambiguity is to be avoided. The Arabic cooccurring adjectives with complement always occur further away from the modified head noun following the other types of adjectives (those without complements). This restriction seems to follow from the fact that ambiguous structures may result if not observed.

Therefore, the above statement by Ney should be modified in order to accommodate this fact.

The third process affecting the adjective ordering is length. Ney remarks that "at least in isolation, all combinations of adjectives in noun phrases seem equally good or bad when these combinations exceed a minimal number of adjectives in the noun phrase such as two or three." (cf. Ney 1983 : 104).

Ney states that "patterns which depart from the 'normal' require 'contrastive stress' or 'comma intonation", and observes that nobody has argued accordingly. In fact a closer look at the relevant literature shows that Ney's statement is not accurate since there are many linguists who argued this (cf. Whorf 1945 : 5, Strang 1962 : 120-125, Crystal 1971, Bache 1978).

However, the following points about Ney's can be stated :

1. Ney uses frequency of occurrence unsupported by any theoretical account. This is because the variables used by Ney (cf. "intended meaning", the nature of adjectives") are not made explicit. The general statement which can be drawn from Ney's discussion is that : native speakers prefer a definite order of high-frequency adjectives while the order of low-frequency adjectives does not matter.

2. Although Ney states that his aim is to find whether or not the order of prenominal adjectives is semantic, there is no evidence to showing that, i.e. he did not discuss any semantic preferences based on adjective types.

3. Ney (1983 : 100) remark that "any speaker can change the order of adjectives to express some particular meaning" is not original. Quirk et al (1972, 1985 : 1341) and Hetzron (1976 : 178) have observed that the main principle in adjective ordering is to place the 'objective and undisputable qualifications' closer to the noun and the more opinion-like adjectives farther away. This is exactly what Ney states in order to account for the adjective ordering (Ney 1983 : 100).

7.3 Adjective Complementation :

The purpose of this section is to show what types of adjectives are more verb-like and what types of adjectives are less verb-like with respect to their complementation. The criterion of verb-likeness is needed because it predicts what adjective can immediately follow denominal adjectives when the three single unmodified adjectives cooccur : denominal, Simple, and Participial. Note that the noun-likeness principle contrasts sharply with the verb-likeness feature, and only predicts what type of adjective can immediately follow the head N, i.e. it does not predict whether a Simple or a Participial adjective should follow the denominal adjective : Head N+Denominal+{ Simple or Participial }.

The following can be stated according to our data which are presented in Table (5) and (6), below :

- 1.i Denominal adjectives take no complement because they are the least verb-like. (Notice that they are the most noun-like by the noun-likeness principle) QUANTITATIVE
- 2.i Simple and Participial adjectives take more complements because they are more verb-like than denominal. QUANTITATIVE
- 3.i The Participial adjectives are the most verb-like since they take more complements than any other adjective. QUANTITATIVE
- 1.ii Denominal adjectives take no complements, and therefore, they are the least verb-like. QUALITATIVE
- 2.ii Simple adjectives take PP and ?*an* "to-infinitive" complements, and therefore, they are more verb-like than denominal. QUALITATIVE
- 3.ii Participial adjectives, particularly, those derived from transitive verbs, take a range of complements including PP, ?*an* "to-infinitive", *ma* "what", and accusative NP, and are therefore, the most verb-like. QUALITATIVE

It will be argued that the Participial adjectives, because of (3.i) and (3.ii), are the most verb-like adjectives followed by Simple adjectives which, because of (2.i) and (2.ii), are less verb-like, then the denominal adjectives in turn, because of (1.i) and (1.ii), are the least verb-like adjectives and the most noun-like ones.

Notice that the distinction gained from the adjective complementation adds to other distinction already discussed. i.e. there are more other features which we discussed in the previous chapters which show the same result, in the sense that they indicate which type of adjectives are more associated with verbs and which are less. These features are summarized below :

1. denominal adjectives

- a. They are derived from corresponding noun base by the suffix *-iyy*.
- b. They generally do not nominalize
- c. They do not accept modification by intensifiers such as *jiddan* "very".
- d. They predominantly occur attributively, the exceptions are very few.

2. Simple and Participial adjectives are derived from corresponding verbs. They occur attributively and predicatively.

3. Simple adjectives :

- a. The verbs from which Simple adjectives are derived express [state].
- b. The participants accompanying their verbs can be [experiencer] or [neutral] but not [agent].
- c. Do not have corresponding imperative Form I verbs.
- d. Their corresponding verbs cannot occur in other criterial tests such as "What happened?" or "What did [agent] do to [patient]".
- e. They generally take the comparative and superlative, modified by *jiddan* "very", among other criterial tests for central adjectives.
- f. Do not have corresponding Form I passive verbs.

4. Participial adjectives :

- a. The verbs from which they are derived express [action].
- b. An [agent] participant can accompany their corresponding verbs.
- c. Have corresponding imperative verbs.
- d. Their corresponding verbs can occur in other criterial tests such as "What happened?" or "What did [agent] do to [patient]".

Participial adjectives derived from intransitive verbs are further distinguished from

those derived from transitive verbs by a number of criterial features :

5. Participial adjectives with corresponding intransitive verbs :
 - a. They do not have a corresponding Form I passive.
 - b. Their corresponding verbs cannot occur in answer to the criterial test question "What did [agent] do to [patient]" because the [action] is not extended to a patient.
 - c. They must have obligatory coindexing in the *sababi* construction (see Chapter V).
6. Participial adjectives with corresponding transitive verbs :
 - a. They can take accusative NP complements.
 - b. They do have a corresponding Form I passive.
 - c. Their corresponding verbs occur in the criterial test question "What did [agent] do to [patient]" because the [action] is extended to a patient.
 - d. They do not have to be coindexed in the *sababi* construction (see 5.2 in Chapter V).

(1) above shows that denominal adjectives are the least verb-like. (2) shows that Simple and Participial adjectives are more verb-like. (3) shows that although Simple adjectives have corresponding verbs they are less verb-like than Participial adjectives. (4) shows that Participial adjectives are the most verb-like adjectives. (5) and (6) show that Participial adjectives derived from intransitive verbs are less verb-like than those derived from transitive verbs. Therefore, the verb-likeness feature is actually signalled by other features which have been discussed earlier (§5.1.3 and §5.2), and the generalization with respect to the adjective complementation adds one more feature. But notice also that these features in (1-6), treated in earlier Chapters, were not discussed with respect to what is verb-like and what is not but rather with an aim to indicate a clear difference between the various types of Arabic adjectives.

This section does not treat Arabic adjective order, but discusses an important aspect of their complements which affects their order if they occur in a sequence. We will distinguish

between the three types of Arabic adjectives (denominal, Simple and Participial) with respect to the type of complements they can take. It will also be argued that the type of complements an adjective can take shows whether it is more verb-like or less verb-like. They vary with respect to the total number of examples in which they occur with a following complement in the data. . The importance of this is two-fold :

1. Adjectives which occur with a complement (heavy adjectives, i.e. comp-A) appear at the end of a sequence following other adjectives.
2. Adjectives which are verb-like, Simple and Participial, when without a complement (nonheavy adjectives, i.e. single unmodified adjectives), seem to obey a generalization which employs a continuum between two features, viz. noun-likeness as opposed to verb-likeness. The noun-likeness feature predicts that the denominal adjectives precede the less noun-like adjectives, Simple and Participial. Notice that this does not mention any thing about what immediately follows a denominal adjective, i.e. whether a Simple or a Participial adjective. This is because the noun-likeness feature divides adjectives into two : denominal adjectives as opposed to Simple and Participial. What predicts the order of Simple and Participial single unmodified adjectives, in the absence of a denominal adjective, is the opposing feature, i.e. whether the adjective is more verb-like or not. Notice that this feature divides the adjectives into Simple and Participial as opposed to denominal. But the difference between the verb-likeness feature and the noun-likeness feature relates to the fact that the former, unlike the latter, can predict which adjective is more verb-like and which one is less, i.e. it can distinguish between Simple and Participial adjectives. This is because these two adjective relate to verbs rather than to nouns. That is, in a sequence of single unmodified adjectives those which are more verb-like appear at the end of a sequence following other less verb-like adjectives. This means that Simple adjectives because they are less verb-like -not because they are more noun-like, will precede Participial adjectives when they cooccur : Head N + Simple A + Participial A.

Note that the criteria of verb-likeness or noun-likeness only apply to SINGLE

UNMODIFIED adjectives because the Participial adjectives are the most verb-like, and therefore, they should occur at the end of a sequence. However, when two adjectives cooccur, one Participial single unmodified and the other Simple comp-A, i.e. Simple adjective followed by a complement, the latter will occur at the end of the sequence although it is less verb-like :

Head N + Participial single unmodified A + Simple comp-A

Therefore, although the feature of verb-likeness is correlated with the possibility of whether an adjective takes a complement or not, it is also correlated with other features such as whether the Participial adjective takes an accusative NP complement. In other words, what seems to be governing the sequence in the presence of an adjective with complement is whether the adjective actually occurs with a complement or not rather than whether it is potentially more verb-like. And because there is another structure of heavy adjectives viz, construct-A, two rules are required : one when there is a heavy adjective in the sequence and one when there is no heavy adjective in the sequence.

Therefore, a correlation is possible between occurring with a complement and being verb-like, and both of these two characteristics seem to affect the adjective order in one direction, i.e. adjectives with complement and verb-like adjectives occur at the end of a sequence³⁴. But, as we noted above, and for reasons which will become clear in due course the two features (comp-A and verb-likeness) will be separated and included in different generalizations.

The data show that the participial adjectives are the most frequent type which take complements (84 percent). The data also show that the denominal adjectives do not occur with complements. Between the two extremes, central adjectives are found, since they are the second most frequent type which take complements (16 percent). It is interesting to note that when adjectives from either end of the continuum occurring in the same NP, and modifying the same head N, the most verb-like (Participial) occurs further away from the head noun, as opposed to the most noun-like (denominal), which occurs close to the head noun. Thus, the quantitative fact about the various adjective complementation seems to provide important evidence which neatly correlates with the criteria of "noun-likeness" and

that of verb-likeness. Since the quantitative facts also correlate with the type of complement an adjective can take, we will study the different types of adjective complementation and propose a distinction between complements of adjectives and peripheral elements. Although this distinction is not always clear, there are some criterial features, which provide grounds for the difference. But before we discuss the types of Arabic adjective complements we will distinguish between Arabic and English adjectives which take complements.

7.3.1 Attributive Adjectives With Complements :

While both attributive and predicative Arabic adjectives can take complements, English attributive adjectives with complements normally cannot occur in prenominal position but must be postposed (Quirk 1985 : 420 and 1220) :

"The only position in which an adjective cannot normally be followed by its complement is the premodifying position in a noun phrase."

Therefore, English attributive adjectives with complements cannot occur prenominally as in (20.b) but are postposed, as in (20.c). The postpositive structure can be regarded as reduced relative clause as in *I know an actor who is suitable for the part*. Moreover, in a postpositive structure a sequence of two or more adjectives (if any) must be connected by a coordinator such as *and*, as in (20.d), and when a coordinator is absent the result is unacceptable, as in (20.e). Such postpositive constructions are not very common in English.

- 20.a a suitable actor.
- 20.b *a suitable for the part actor.
- 20.c an actor suitable for the part.
- 20.d an actor good and suitable for the part.
- 20.e *an actor good suitable for the part.

However, Arabic attributive adjectives, unlike English attributive adjectives, can occur attributively with a complement without being postposed. They also do not require the presence of a coordinator when more than one adjective occur.

- 21.a *makaanan* *xaliiqan* *bi* *juluusi-hi*
 place appropriate for sitting-his
 "A place appropriate for his sitting (down)". (C103)
- 21.b *?aqbala-taa* *naHwa* *makaanin* *xaalin* *qariibin* *min* *majlisi-hi*
 came-Dual F. towards place empty close to room-his
 "They both came towards a place empty (and) close to his room". (I154)
- 21.c *?al-makaanu* *xaliiqun* *bi* *juluusi-hi*
 the-place appropriate for sitting-his
 "The place is appropriate for his sitting (down)".

In each of the above examples the underlined adjective takes a complement. In (21.a-21.b) the adjectives are attributive, and that in (21.c) is predicative. In both (attributive and predicative) the adjectives follow their corresponding head nouns. For instance, the underlined adjective, *xaliiqan* "appropriate", in (21.a), follows the head noun *makaan* "place", occurs attributively and takes the following PP, *bi juluusi-hi* "for his sitting", as a complement. On the other hand, in (21.c) the same adjective occurs predicatively in the same position and takes the same complement.

This shows that in Arabic the adjective position is the same whether attributive, as in (21.a-21.b), or predicative, as in (21.c), since position does not signal the different functions of the adjectives. Arabic predicative adjectives, as in (21.c), must occur without the definite article and generally in the nominative case, i.e. do not have to agree with the head noun in the case inflection. On the other hand, attributive adjectives, as in (21.a) or (21.b), can occur with or without the definite article (according to the modified head noun whether definite or not), in the same case of the modified head noun. Moreover, (21.b) shows that Arabic, unlike English, allows the occurrence of two or more adjectives

attributively, even if one of the adjectives takes a complement. Furthermore, Arabic does not require the presence of a coordinator between two attributive adjectives when one of them has a complement. In other words, (20.d) shows that English requires that an attributive adjective with complement be postposed, and if preceded by another adjectives, to be coordinately conjoined by a coordinator such as *and*. Such requirements are not applied to Arabic adjectives, as shown in (21.b).

Therefore, in English, unlike in Arabic, two or more adjectives cannot occur in the same sequence (without a coordinator) when one of them is with complement. This difference between English and Arabic seems to have gone unnoticed by scholars concerned with adjective order in general.

7.3.2 Types of Adjective Complements :

Arabic adjective complements can be divided into four types. There is a considerable parallel between the complement associated with intransitive verbs and those associated with adjectives. Moreover, participial adjectives, particularly active, can take NP complements. Arabic adjective complements occurring in the data are summarized below :

Types of Arabic Adjective Complements					
Complements	Participial A	Simple A	Denominal A	Total	Percentage
1. Prepositional Phrase	730	136	-	866	96.5 %
2. <i>?an</i> "that"	4	5	-	9	1 %
3. <i>ma</i> "what"	3	-	-	3	.3 %
4. Accusative NP	20	-	-	20	2.2 %
Total	757	141	-	898	
Percentage	84 %	16%	-		

Table (5)

The above Table shows that there are four various types of Arabic adjective complementation. Denominal adjectives take no complement. Simple and Participial

adjectives take a PP and *?an* "to-infinitive" complements. Furthermore, Participial adjectives differ from Simple and denominal adjectives since they can take *ma* "what", and an accusative NP as complements. Therefore, there is a clear difference between the three types of adjectives as to the type of complement they take. The Table also shows that the verb-like adjectives, i.e. participial and Simple adjectives take more complements than the noun-like adjectives, i.e. denominal. The number of complements following the first two types of adjectives are 757 and 141, respectively as opposed to denominal adjectives which are followed by no complements. However, there are few examples in which at first sight a denominal adjective seems to have a PP complement. However, a closer examination shows that they belong to higher nodes and not to lower nodes. On the other hand participial and Simple adjectives take various complements as exemplified in (22) and (23) respectively³⁵.

Various prepositional adjuncts follow all types of adjectives, but all those following the denominal adjectives (in 13 examples) are noncomplements, as illustrated, below.

22. ragbatin nimr-iyvatin _{pp}[fi ?al-?iftiraasi]
 desire tiger-DEN in the-eating
 "A tiger-like desire in eating". (I143)
- 23.a jacara bi ?alamin Haadin _{pp}[fi saacidi-hi]
 felt with pain severe in hand-his
 "He felt a severe pain in his hand". (D18)
- 23.b natijata ?al-?ixtilaaTi ?al-muTlaqi _{pp}[bayn ?al-jinsayni]
 result the-mingling the-unrestricted among the-genders
 "A result of the unrestricted mingling among the two genders". (E114)

The underlined adjectives in (22-23) are of various types : denominal, Simple, and Participial, respectively. They are followed by various PPs, in brackets, which are not complements to the preceding adjectives. All the 13 examples in which a denominal adjective is followed by a PP in the data are similar to that in (22). That is the PP *fi ?al-*

?iftiraasi "in the eating" is not an expansion of the AP *nimr-iiy-atin* "tiger-like". The same is true for the APs in (23.a) and (23.b) which show that these PPs are not complements to the preceding adjectives. On the other hand, a complement PP to an adjective is found only with Simple and Participial adjectives, as exemplified below.

24.a fi ?ad-dahliiz-i ?al-mufDii _{pp}[?ila Hujrat-i ruJdi]
 in the-hall-GEN the-leading to room-GEN Rushdi
 "In the hall leading to Rushdi's room". (J243)

24.b *fi ?ad-dahliiz-i ?al-mufDii _{pp}[]

25.a wa laysa huwa ?al-waHiid ?al-jadiir _{pp}[bi ?al-xafayati]
 and neg. he the-only the-worthy of the-fear
 "And he is not the only (one) worthy of fear". (D241)

25.b *wa laysa huwa ?al-waHiid ?al-jadiir _{pp}[]

26.a kaana mugraman _{pp}[bi kurati ?al-qadami]
 was fond of ball the-foot
 "He was fond of football". (10147)

26.a * kaana mugraman _{pp}[]

The underlined elements in (24-26) are Simple and Participial adjectives, respectively. The bracketed PPs in (24.a) and (25.a) are obligatory complements to their corresponding preceding adjectives. When these PP complements are omitted the result is unacceptable; hence the asterisks at (24.b), (25.b) and (26.b). However, not all complements are obligatory, therefore, when the complements in (27.b) and (28.b) are omitted the result is still acceptable.

27.a ?ad-duur-u maftuuH-at-un _{pp}[la-ka]
 the-houses-NOM opened-F.-NOM for-you
 "The houses are opened for you." (D90)

27.b ?ad-duur-u maftuuH-at-un _{pp}[]

28.a laday-ha Suuratun waaDiHatun pp[la-ha]

with-her picture clear for-her

"She has a clear picture for her".

(F68)

28.b laday-ha Suuratun waaDiHatun pp[]

The PPs in (27) are complements to the preceding underlined adjectives since they do not occur independently of the valency of the preceding adjectives. That is, some adjectives include complements and some adjectives exclude complements and some may require complements as obligatory constituents. It might be thought that the PPs in (27.a) and 28.a) are peripheral (cf. Matthews 1981 : 140) but they are not. Peripheral elements can occur independently of the valency of other words, therefore, they can be not just deleted but added. They are "free from any restriction but the need to make sense" (Matthews 1981 :127). On the other hand, although optional complements are deletable, they cannot be freely added to other sentences since their occurrence depends on the valency of the governing word. Moreover, peripheral elements, unlike complements, are not restricted as to the number that can be added, i.e. it is not possible to give the exact number of peripheral elements a clause may contain. (cf. Quirk 1985 : 50). Thus, peripheral elements such as time adverbs can be added to any sentences as shown below :

29.a ra?ay-tu ?al-walada ?ams

saw-I the-boy yesterday

"I saw the boy yesterday".

The underlined peripheral element in (29) is not only optional but also can be added to other sentences without any restriction but the need to make sense. Notice that examples such as *I will see him yesterday* are ruled out by the general meaning of the lexemes *will* and *yesterday*. This restriction differs from other restrictions found with respect to complements. For example, the verb *give* establishes a direct constructional link with nouns such as *protection* : *to give protection* rather than *to give defence*. Such restriction

does not follow from the meanings of *give* with other combinations.

(28) show that the criterion of obligatoriness for complements is not sufficient to establish the distinction since even constituents very closely linked to the verb can sometimes be omitted. However, the examples in (24-26) show clearly that complements are obligatory with at least some adjectives. Moreover, complements such as direct objects, are normally, i.e. when the speaker does not presuppose a prior knowledge on the hearer side, obligatory and cannot be omitted. Therefore, examples like (30) with the direct object dropped are unacceptable.

30.a *raʔay-tu

saw-I

"I saw".

30.b *Daraba calyun

hit Ali

"Ali hit".

31.a raʔay-tu ʔal-walada

saw-I the-boy

"I saw the boy".

31.b Daraba calyun ʔal-kalba SabaaHan

found Ali the-dog morning

"Ali hit the dog in the morning".

The above examples show that direct objects are obligatory contrary to the claim made by the traditional Arab grammarians, who take an extreme position and observe that the different types of accusative complements are all optional, without distinguishing between the direct object NPs and the other types of accusative adverbials, such as time adverbs, e.g. *SabaaHan* "in the morning" in (31.b). Owens (1984 : 32) explicitly summarizes this³⁶ :

"Verb complements other than the agent are all optional elements and collectively are known as peripheral or leftover "faDla" items. Their number has generally come to be accepted as five - direct, reason, accompaniment, absolute, and circumstantial complements".

Unlike Owens, Cantarino (1975 Vol II :162) divides the Arabic complements into two types : verbal, which he calls direct object and adverbial, which he calls specifying

elements. He observes that :

"As previously indicated, besides its function as a **necessary complement** to the verbal idea, the accusative may introduce complementary modifications of the verb regarding time, place, or any special circumstances surrounding the action" (cf. Cantarino 1975 Vol II : 171).

This clearly shows that direct objects constitute a necessary complement which is related to the verb, for example, in (31.b) where the verb *Daraba* "hit" expresses a relationship between someone who performs the action *calyun* "Ali" and something that is beaten *?al-kalba* "the dog". However, the traditional grammarians probably consider that the speaker presupposes some knowledge in the hearer. But notice that this is not the normal level of analysis assumed in the discussion of complements. Therefore, it is an inadequate generalization that all verb complements are optional or "leftover".

Moreover, the central concern in (31.b), for instance, are the two participants *calyun* "Ali" and *?al-kalba* "the dog" whereas the expression of time *SabaaHan* "in the morning" is not specific to the action of *Darb* "beating". Thus, peripheral elements such as *SabaaHan* "in the morning" differ from *?al-kalba* "the dog", in (31.b) since the former do not play the role of an argument of the relation expressed by the verb, but can be explained as originating from another proposition. Thus, *SabaaHan* "in the morning" may be derived from a proposition *haaʔa Hadaθ SabbaaHan* "This happened in the morning" added to the main proposition of (31.b) *Daraba calyun ?al-kalaba* "Ali hit the dog".

Other types of adjective complements presented in Table (5) above are the *?an* "to-infinitive" and the *ma* "what" complements, as exemplified below.

32.a ?indafac-tu ka [?at-tilmiiθi ?al-xaaʔifi **?an** yansaa]_{NP}

rushed-I like the-student the-afraid to forget

"I rushed like the student (who is) afraid to forget".

(F12)

32.b wa kaana muʔakkadan **?an** takuuna ?a-rwac

and was confirmed to be more-wonderful

"And it was confirmed to be more wonderful".

(F19)

- 32.c ?ila ?al-Haddi ?al-faaSili **ma** bayna ?iraadati-hi wa taHqiiqa-ha
 to the-fence separating what between intention-his and accomplishment-it
 "To the fence separating what (is) between his intention and its
 accomplishment". (H24)

(32.a-32.b) show the *?an* "to-infinitive" complement, and that in (32.c) shows the *ma* "what" clause. The first type occurs with both Simple and Participial adjectives, respectively. The second type occurs only with Participial adjectives. These are all complements to their preceding underlined adjectives. Notice that the *ma* "what" complement following the Participial adjective *?al-faaSili* "separating" can be dropped, leaving an acceptable sentence, as in (33.a). However, with the verb corresponding to the Participial adjective the *ma* "what" complement cannot be dropped. Therefore, (33.b) is asterisked.

- 33.a ?ila ?al-Haddi ?a-faaSili
 to the-fence separating
 "To the separating fence".
- 33.b *?al-Haddu yafSilu
 "the-fence separates".

However, this is not to suggest that the *ma* "what" complement is a peripheral element, but to show that the same complement can be obligatory with the verb and optional with its corresponding Participial adjective. This adds supporting evidence for the view that the Arabic participle is an adjective, as discussed in Chapter V. This is very frequent in the data where we find Participial adjectives derived from corresponding transitive verbs generally taking a complement, which can be taken as indicating that its verbal force has been reduced.

The occurrence of the various types of complement is summarized above in Table (5). Table (6), below, shows, in detail, the occurrences of the prepositional phrases following

the adjectives, whether complements or noncomplements (i.e. belong to higher nodes). The prepositions in (1-13) are ordered according to their occurrences in the data. The most frequent prepositional phrase is that which is introduced by *bi* "with". We will not discuss these various prepositions

The Non-accusative Complements

B.Prepositions	Occurrences	B. Prepositions	Occurrences
1. <i>bi</i> "with"	329	8. <i>bayn</i> "between"	21
2. <i>fi</i> "in"	139	9. <i>taHt</i> "under"	9
3. <i>li</i> or <i>la</i> "to"	112	10. <i>waraa?</i> "behinde"	6
4. <i>min</i> "from"	119	11. <i>fawq</i> "above"	3
5. <i>cala</i> "on"	115	12. <i>?amaam</i> "in front of"	3
6. <i>?ila</i> "to"	66	13. <i>other</i>	11
7. <i>can</i> "from"	26		
Total			969

Table (6)

7.3.3 Summary of The Criterial Features for Adjective Complements :

1. Reference to a Performer :

A direct object generally refers to a performer, and is therefore an 'actant' (participant). The adverb of time, on the other hand, does not refer to a performer; instead it sets a performance in context. Therefore, it is a 'circonstant' (circumstantial) element. The criterion, then, is that participants are complements and circumstantial elements are not.

2. Collocational Restriction :

There is a direct constructional link between the object and the predicator which is established by 'collocational restrictions'³⁷. For instance, with the verb *give* it is more usual to talk of "giving protection" or "giving help" than of "giving defence" or of "giving rescue" which can be used with the verb *expect*. Such restrictions affect complements rather than adverbials such as *SabaaHan* "in the morning". Thus complements are generally associated with specific lexical heads in a way that adjuncts are not. More precisely, certain heads cooccur with certain complements, whereas an adjunct of a particular type is

generally possible in any phrase of a particular kind whatever its head is. Moreover, there is no limit as to the number of adverbs which can be added.

3. Omissibility :

Complements are obligatory with at least some predicators. Adverbs, such as *gadan* "yesterday" are not. Therefore, adverbials are generally omissible (cf. Herbst 1984 : 291).

4. Insertion :

The test of insertion rather than omission is useful in distinguishing between complements vs adverbials. The adverb *SabaaHan* in (31.b) can be freely added.

5. Passive :

A constituent that can be made the subject of the sentence by turning the sentence into the passive is an object. Thus the object complement *?al-kalba* "the dog" in (31.b) can be the grammatical subject in the corresponding passive : *Duriba ?al-kalbu* "the dog was beaten".

6. Formation of a Separate Proposition :

If a constituent can be paraphrased by means of a sentence separate from the main sentence, and which can be added before as well as after the main sentence, this constituent is a free modifier. Thus, to (31.b) the proposition *wa Hadaθ haaθa SabaaHan* "and this happens in the morning" can be added to the main proposition :

calyun Daraba ?al-kalaba wa Hadaθ haaθa SabaaHan

"Ali hit the dog and this happened in the morning".

7. Mobility of a constituent :

Free modifiers generally occur in different positions in the sentence as exemplified in (34).

- 34.a ?adraka SabaaHan ?anna ?ar-rajula barii?un min maraDi-hi
 realized in the morning that the-man cured from sickness-his
 "He realized, in the morning, that the man (is) cured from his sickness".
- 34.b SabaaHan ?adraka ?anna ?ar-rajula barii?un [min maraDi-hi]

On the other hand, the bracketed adjective complement generally follows the double-underlined adjective as in (34.b) and when it does not the result is ungrammatical, therefore (35.b) is asterisked.

- 35.a fa sa?ala cijr ?al-Hallaaqa ?af-Jaquuf [bi dassi ?anfi-hi fi kulli jay?in]
 asked Ejr the-barbar the fond of hiding nose-his in every thing
 "Ejr asked the barbar (who is) fond of hiding his nose in everything". (D13)
- 35.a * fa sa?ala cijru ?al-Hallaaq [bi dassi ?anfi-hi fi kulli jay?in] ?af-Jaquuf

8. The "Do So" Formula

When a constituent (or an alternative of it) can be repeated in place of "X" in the formula it is a free modifier; when it cannot it is a complement; *do* should be interpreted as a pro-form; if such an interpretation is impossible the test is not valid (cf. Buysschaert 1982 : 63).

(and, but) Alt. Subject DO SO Alt. X

- 36.a * calyun yafcalu kaʕaalika ?al-kalba
 Ali does so the-dog
 "Ali does so the dog"
- 36.b calyun yafcalu kaʕaalika kulla yawmin
 Ali does so every day
 "Ali does so everyday".

Another important formula which can be used to distinguish between complements and peripheral element is the "WHAT BE GOING ON X". If a constituent is repeated in the

position of X then it is a peripheral element. An item such as *SabaaHan* "in the morning" can occur in that position.

9. Restriction on The Number of Elements added :

Complements are much more subject to grammatical rules than adjuncts. while there will be a maximum of three or so object complements in any one clause, there is no grammatical limit to the number of adjuncts that may appear. Complex combinations of adjuncts will be excluded by semantic and stylistic factors rather than grammatical ones (cf. Huddleston 1984 : 179).

10. Expansion of The Relevant Category :

From a syntactic point of view, it is generally assumed that complements combine with a lexical category to form a related intermediate phrasal category, whereas adjuncts combine with an intermediate category to form the same intermediate category (cf. Borsley 1991 : 62). This can be expressed in the following diagram :

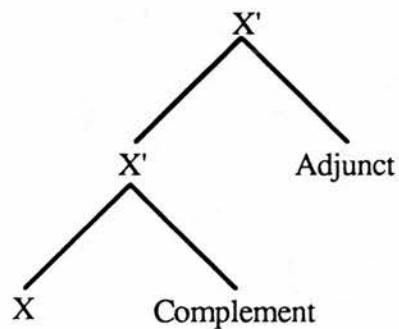


Figure (3)

Thus a sentence like (37.a) can be represented as in Figure (4), below

37.a haaða kalaam-un xaliqun bi ?al-jabalaawiy

this talk-NOM appropriate to the-Jabalaawiy

"This talk is appropriate for the Jabalaawiy".³⁸

(I179)

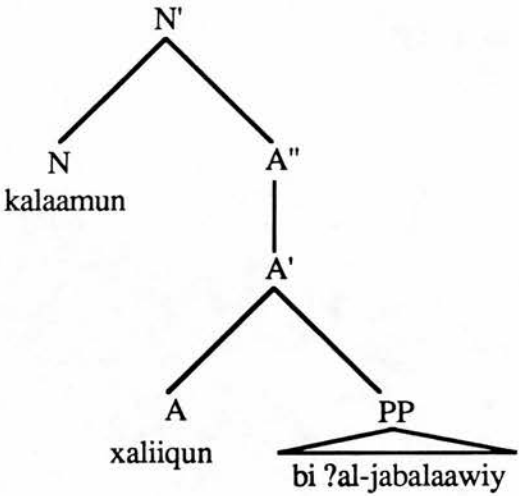


Figure (4)

Figure (4) shows that the PP complement *bi ?al-jabalaawiy* "for Jabalaawiy" is a sister to a X category, namely the adjective *xaliqun* "appropriate", rather than to a X' category. On the other hand, adjuncts like *SabaaHan* "in the morning" in (31.b) are sisters to a higher node, i.e. to a X' category as shown in Figure (3).

12. Homogeneity of The Class :

Adverbs, unlike direct objects, are characterized by great heterogeneity (cf. Koktova 1986 : 83), and one of the sharpest contrasts between objects and adverbials resides in the syntactic homogeneity of the former and heterogeneity of the latter. Sanders (1984 : 221) remarks that :

"The class of linguistic expressions traditionally referred to as adverbial is notoriously diverse, both in the form and content of expressions themselves and in the range of syntactic, semantic and pragmatic functions and relations in which they participate."

7.4 The Order of Arabic Adjectives :

The data show that there are 1293 examples in which two or more adjectives cooccur forming a sequence. Forty examples must be excluded from this list since they include an adjective occurring in a NP and followed by a predicative adjective, i.e. although the two adjectives are linked to the same head they do not constitute a sequence of attributive adjectives occurring in the same NP nor do they constitute a sequence of predicative ones. This is exemplified in (38), which show that the single-underlined adjectives are attributive immediately followed by the predicative double-underlined ones, and do not meet the criterion for a sequence of adjectives since they are not in the same NP and are not predicative.

38.a ?al-Haalatu ?al-caamatu xaTiiratun

the-situation the-general dangerous

"The general situation is dangerous".

(J218)

38.b ?al-Haa?iTu bi lawni-hi ?al-qaatimi waaDiHun

the-wall with colour-its the-dark clear

"The wall with its dark colour is clear".

(F55)

The remaining 1253 examples can be assigned one or another of the structures in (a)

- | | | | | |
|-----|-----|--------------------------------------|---------------|--------------|
| (a) | i. | [Head N + A + A ...] _{NP} | 1122 examples | = 90 percent |
| | ii. | Head N + Pred A + Pred A ... | 131 examples | = 10 percent |

Cooccurring attributive adjectives constitute 90 percent while the predicative ones are only 10 percent. Although we shall discuss this difference with respect to the various types of adjectives, we will not concentrate on it since the postulated generalizations apply to both structures. The 1253 examples include various types of adjectives, which will be discussed in this section.

Our data show that the strongest generalizations with respect to Arabic adjective

ordering relate to whether an adjective is heavy or nonheavy, noun-like or verb-like.

The discussion falls into different sections : heavy adjectives (comp-A and construct-A) and nonheavy adjectives, i.e. single unmodified adjectives (denominal, Participial and Simple adjectives). Comp-A is an adjective which occurs in the data with a following complement see §7.3. The previous section on Arabic Complementation deals with the different complement-taking potentiality. While Participial and Simple adjectives are potentially capable of taking a complement, denominal adjectives cannot : the former are verb-like and occur in the data with complements while the latter, which is noun-like, does not.

In §7.4.1.1 we shall observe that the "heaviness" principle was developed with respect to phenomena other than adjectives. However, we will extend it to account for Arabic adjective order. Our study shows that there are two heavy structures, viz comp-As and construct-As, which appear further away from the modified head N following other single unmodified adjectives. We shall try to relate the ordering of the comp-As and the construct-As to the concept of "heaviness", since both constructions contain more than one word. We shall argue that comp-A, unlike construct-A, allows expansion, and is therefore heavier than construct-A, which generally contains two words forming an indivisible unit. We will provide examples from our data showing that when the two cooccur modifying the same head N the comp-A follows the construct-A and occurs further away from the head N towards the end.

In the second section we shall show that when single unmodified adjectives occur in a sequence they follow a certain order according to which the more noun-like adjectives are placed close to the modified head N whereas the more verb-like adjectives occur further away towards the end of the sequence. The concept of noun-likeness, which is found in the literature on adjective ordering, will be employed, modified slightly to suit the data. The two verb-like adjectives vary in their complement-taking potentiality and in their degree of similarity to verbs. That is, unlike the Simple adjective, the Participial adjective is potentially more capable of taking a complement, and more verb-like since it can take an accusative NP. It will be argued that because of these the former tend to precede the latter.

Thus in a sequence which includes the three types of adjectives we will expect to find the following order :

- (i) Head N + Denominal A + Simple A + Participial A

The data provide us with examples which prove the point.

Finally, in §7.4.2.4 it will be discussed briefly that when various semantic types of the Simple adjectives (Size, Colour, Age and Evaluation) occur in the same sequence there are some weak tendencies which show that Arabic Simple adjective order is the mirror image of English, as shown below :

- | | | |
|------|---|---------|
| (i) | subjective adjectives + objective adjectives + Head N | English |
| (ii) | Head N + objective adjectives + subjective adjectives | Arabic |

The subjective-objective principle found in the literature on English adjectives predicts that the more subjective adjectives, opinion-like, (e.g. *beautiful*) precede the more objective ones (e.g. *white*). Single unmodified Simple adjectives in Arabic follow the same principle since the more objective occur close to the modified head whereas the more subjective appear further away towards the end of the sequence. Notice that in (i) the subjective adjectives occur at the beginning of the sequence whereas in (ii) they occur at the end of the sequence. But this does not mean that Arabic adjective order contradicts the subjective-objective principle because of the difference between English and Arabic word order. That is, what is relevant is the order of adjectives with respect to the modified head noun rather than with respect to the beginning or end of a sequence. Therefore, the Arabic adjective order is not in conflict with the subjective-objective gradience but rather provides a supporting evidence from another different language, such as Arabic, as to its accuracy.

7.4.1. Arabic Heavy Adjectives :

Heavy adjectives in Arabic Are divided into comp-A (adjectives with complement) and construct-A (adjectives introducing a construct phrase). Our data show that there are 203 examples in which heavy adjectives occur in a sequence. In 201 of these a heavy adjective follows a single unmodified adjective and occurs further away towards the end of the sequence. Heavy adjectives are discussed in the light of the heaviness principle which predicts that heavy structures occur towards the end. But before we discuss the heavy adjectives let us first discuss the concept of heaviness.

7.4.1.1 The Heaviness Principle :

In this section we will define this principle with respect to the Arabic data and give examples showing how it can be applied in order to account for the ordering of Arabic adjectives. The importance of this principle stems from the fact that our data show that there are two types of heavy structures related to the ordering of Arabic adjectives, the comp-A, and the construct-A constructions. The data show that the adjectives occurring in these two heavy structures always appear further away from the modified head N following the other types of adjectives. That is, adjectives occurring in comp-A or in construct-A will follow single unmodified adjectives, and the ordering accords with the heaviness principle :

Head N + single unmodified A + heavy A

Consider the following examples :

39.a Zahra rajul-un gariib-un naHiil-u ?al-qaamat-i

appears man-NOM strange-NOM thin-NOM the-frame-GEN

?aswad-u ?al-liHyat-i

black-NOM the-beard-GEN

"A strange thin (in) the frame black (in) the beard man appears, i.e. a man with a thin body and black beard appears". (D268)

structures towards the end (cf. Bever 1970 : 330).

- 40.a David showed the girl the book that he liked a lot.
 40.b David showed the book that he liked a lot to the girl.

Similarly complex adverbs are ordered according to their complexity. The basic rule is that more complex adverbs are ordered towards the end of the sentence. Thus (41.a) is more acceptable than (41.b), while (41.c) is more acceptable than (41.d)⁴⁰ :

- 41.a John walked briskly in a slightly more northerly direction.
 41.b John walked in a slightly more northerly direction briskly.
 41.c John walked north at a slightly brisker pace.
 41.d John walked at a slightly brisker pace north.

The same constraint applies to what Bever calls "prenominally conjoined adjectives of the same class", (42.a) being preferred to (42.b).

- 42.a The steel and artificially strengthened fibre plastic tube broke.
 42.b The artificially strengthened fibre plastic and steel tube broke.

The heaviness principle applies to our Arabic adverbials. For example, (43) show that the double-underlined adverbials, which are heavier than the single-underlined ones, occur towards the end.

- 43.a wa laakinna-hu raDiya ?axiiran can Tiibi xaaTirin

but-he accepts finally from good intention

"But he accepts finally from good intention .."

(J24)

- 43.b limaaða la tanTaliq Hurran mugarridan fi faDaa?i ?al-Hubbi

why neg. start freely singing in space the-love

"Why don't you start freely singing in the sky of love".

(C46)

Moreover, the "heaviness" concept is also established by Grosu and Thompson (1977) and by Dryer (1980), who discuss a universal hierarchy governing the position of clausal complements of verbs in a structure like (*that Mary is a fool*) in *She believes that Mary is a fool*. Cross-linguistically, Hawkins (1983 : 89) observes that such a structure occurs at the end of the sentence very frequently, less frequently in sentence initial position, and least frequently of all in medial position (*She that Mary is a fool believes*)⁴¹. Grosu and Thompson remark that the placing of heavy constituents at the end has consequences for the relative ease with which the argument-predicate relations of the sentences can be recognized. Thus heavy complements are best in final position since they occur at a point where the argument-predicate structure of the sentences has already been established. Grosu and Thompson (1977) suggest a processing account of the "heaviness" of an element and argue that the heavier the constituent the greater is the load on temporary memory as it is processed. To quote,

"Final, initial, and medial environments constitute a hierarchy of increasing restrictiveness (with respect to the privileges of occurrence of 'heavy' constituents), because heavy constituents can in principle put an increasing load on temporary memory (and thus interfere with the analysis of the matrix clause) in those environments" (cf. Grosu and Thompson 1977).

Therefore, examples like (44.a), where the correct argument-predicate relations are clarified by placing *to Mary* adjacent to *gave*, are preferable to (44.b) :

44.a John gave to Mary a book which was about the Gulf War and the Desert Storm.

44.b John gave a book which was about the Gulf War and the Desert Storm to Mary.

The "heaviness" concept is discussed in a universal principle by Hawkins (1983 : 89-114) who observes that in "prepositional" languages, such as Arabic, "lighter" constituents are placed to the left of the head and "heavier" ones to the right. Thus demonstratives and numerals which are typically morphologically shorter than adjectives occur to the left of the head whereas adjectives occur to the right of the head followed by heavier constituents such as genitives and relative clauses respectively. That is, the heavier the constituent the further

from the head it is. Hawkins postulates the following universal hierarchy :

Relative \geq Genitive \geq Adjective \geq {Demonstrative, numerals}

(\geq means "greater than or equal to in heaviness")

Hawkins's universal hierarchy predicts that a relative clause is heavier than a genitive NP which is heavier than a single adjective. Although demonstratives and numerals are "lighter" than adjectives, they do not concern us and will not be discussed. What concerns us is the relative order of the other elements in the hierarchy, which could be extended in order to account for the order of different Arabic adjectives occurring in the same NP. The Arabic data show that there are two types of "heavy" Arabic adjectives which always occur at the end of a sequence of adjectives in the same NP. The first "heavy" structure is comp-A, and the second one is the construct-A. We will define the various features of our "heaviness" criterion.

The above discussion shows that the "heaviness" principle as discussed above is well motivated, since it accounts for the order of various structures other than adjectives and applies in various languages. It will be employed in our account of Arabic adjective ordering, but before we close this section it is important to define a heavy constituent and state its characteristic features. A heavy constituent is characterized by the following features :

1. Quantity of Words :

Adjectives with complements contain more words than those without complements, and therefore, they are heavier. The same is true for construct-A, i.e. adjectives occurring in the construct phrase contain more words.

2. Syntactic Depth of Branching Nodes :

The number of branching nodes is typically more in comp-A and in construct-A than in a single unmodified adjective.

3. Inclusion of Dominated Constituent :

We will see that Comp-A may dominate other comp-A or noncomp-A in which such recursiveness is theoretically unlimited. However, with respect to construct-A

the matter is different. Recursiveness of the construct-As seems to be restricted to Participial adjectives derived from transitive verbs. Other types of adjectives occurring in the "construct phrase", such as Simple or denominal, reject recursiveness (see §2.3.1). If the above is true, it means that we can distinguish between the two heavy structures in Arabic viz comp-A, which is potentially heavy and allows recursiveness, and construct-A, which is potentially less heavy, and does not allow recursiveness. It can be predicted that when comp-As and construct-As cooccur in a sequence they will be in the order construct-A - comp-A (cf. see §7.4.1.3 and §7.4.1.2).

7.4.1.2 The Order of The comp-A :

The data show that comp-As cooccurring with other adjectives appear further away from the modified head N, at the end of the sequence. The data also show that there are 150 examples in which comp-As cooccur either with other attributive adjectives in the same NP (in 140 examples, i.e. 99 percent) or with other predicative adjectives (in 10 examples, i.e. 7 percent). In both types of structure single unmodified adjectives modifying the same head N precede the comp-A, with the sole exception of (48), in which the cooccurring adjectives are predicative rather than attributive and the marking system, particularly, the case and the definite markers, plays an important role in solving the ambiguity which could have been resulted in such a structure. In this connection the following examples are illustrative :

45.a Hubbun haadi?un [mawsuumun bi ?al-?ictidaali]

love quiet characterized with the-mildness

"A quiet love characterized with mildness". (K27)

45.b li yaraa-hu cala ?aD-Daw?i ?al-baahiti [?al-mutasallili min ?al-baabi]

to see-him on the-light the-faded the-sneaking from the-door

"lit. To see him on the faded sneaking from the door light, i.e. to see him on the faded light (which is) sneaking from the door" (I492)

45.c ka ?al-janiini ?al-jamiili [?al-qaabili li ?at-ta?kiili]

like the-infant the-beautiful the-accepting of modification

"lit. like the beautiful and accepting of modification infant". (F49)

46.a wa kaana Tiwaala ?al-waqtu Saamitan [raagiban can ?al-?akli]

and was all the-time silent wishing from the-food

"And he was, all the time, silent and without wish for the food". (J180)

46.b ?al-hawaa?u muctadilun [muDmaxun bi raa?iHati ?al-cu?bi]

the-air mild perfumed with smell the-grass

"The air is mild and perfumed with the smell of the grass". (D42)

In (45-46) each of the double-underlined AP in brackets is heavy and occurs further away from the corresponding head N following the other underlined single unmodified adjectives. In (45) the adjective sequence is attributive and in (46) it is predicative. In (45.a), for example, the heavy attributive AP, *mawsumun bi ?al-?ictidaali* "characterized with mildness" follows the single unmodified one *haadi?un* "quiet". Similar observation can be made about the predicative double-underlined bracketed APs in (46). All the cooccurring comp-As are similar to those in (45-46) except for (48), which shows that predicative cooccurring comp-As may not obey the heaviness principle, particularly when the case marking system plays a role in resolving the possible resulting ambiguity. We will come back to this example. Now consider the following examples.

47.a ka [?al-janiini ?al-jamiili [?al-qaabili [li ?at-ta?kiili ?aT-Tayyibi]]]

like the-infant the-beautiful the-accepting of the-modification the-good

"lit. like the beautiful and accepting of the good modification infant, i.e. like the beautiful infant (who is) accepting good modification".

47.b * ka [?al-janiini ?al-jamiili [?al-qaabili [li ?at-ta?kiili]] ?aT-Tayyibi]

48. kaana xa?inan [malii?an bi ?af-jacri] rafiican Tawiilan

was rough full of hair thin tall

"He was rough, thin, tall and full of hair". (B139)

In the diagrammed structure of (47.a), -which is (45.a) repeated with the single unmodified adjective, *?aT-Tayyibi* "the good" following the heavy one-, in Figure (5), the AP2 includes another AP, namely that in the box.

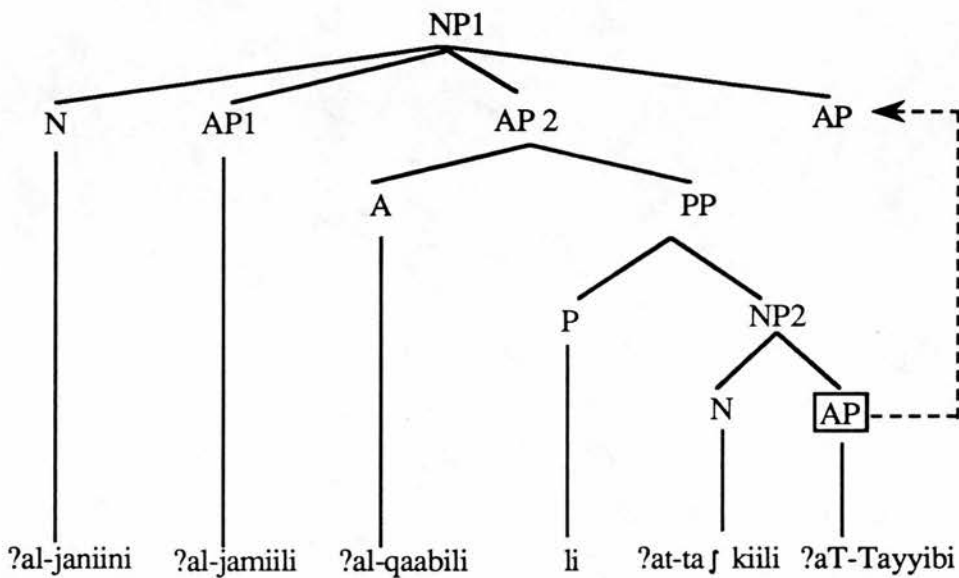


Figure (5)

Such recursiveness is theoretically unlimited. That is, more adjectives can occur under NP2 and modify the same head N viz *?at-ta f kiili* "the modification". Because of this fact a single unmodified adjective occurring in a sequence with a comp-A and modifying the same head N generally precedes, and when it does not, like that in the boxed AP, in Figure (5), it generally modifies the immediately preceding head N rather than the higher one, i.e. *?al-janiini* "the infant". Therefore, example (47.b) is asterisked. But it can also be argued that such an adjective, i.e. *?aT-Tayyibi* "the good" can also be interpreted to modify the higher N *?al-janiini* "the infant". Consequently, the structure is ambiguous between two readings : one in which the boxed adjective *?aT-Tayyibi* "the good" modifies the immediately preceding N and the other when it modifies the higher head N. Notice that this ambiguity is not resolved by the case or the definite marking, i.e. all the adjectives occurring in this structure are genitive definite : *?al-jamiili* "the beautiful", *?al-qaabili* "the accepting" and *?aT-Tayyibi* "the nice". That is, although the single unmodified adjective *?aT-Tayyibi* "the

good", could be interpreted to modify the higher head *?al-janinni* "the infant", the structure is ambiguous.

While the structure of (47.a) is ambiguous, that of (49.b), which is (49a) repeated with the single unmodified adjective *jamiilun* "handsome" following the double-underlined one in the brackets, is unacceptable.

- 49.a *?inna-ka Tayyibun [jadiirun bi kalimaati ?allaahi ?al-mustakinnati fi ?al-quluubi]*
 truly-you good worthy of words God the-inhabited in the-hearts
 "Truly you are good and worthy of God's words (which is) inhabited in the
 hearts". (D205)

- 49.b * *?inna-ka Tayyibun [jadiirun bi kalimaati ?allaahi ?al-mustakinnati fi
 truly-you good worthy of words God the-inhabited in
?al-quluubi ?aS-Saafiyati ?al-muHibbati] jamiilun
 the-hearts the-pure the-loving beautiful
 "Truly you are good and worth of God's words (which is) inhabited in the pure
 loving hearts beautiful".*

Comparing the structure of (47.a) in Figure (5) with that of (49.a) in Figure (6), we see that comp-A in the latter is heavier, i.e. AP2 in Figure (6) is heavier than AP2 in Figure (5). Therefore, (49.b), with its single unmodified adjective *jamiilun* "handsome" following AP2, is unacceptable.

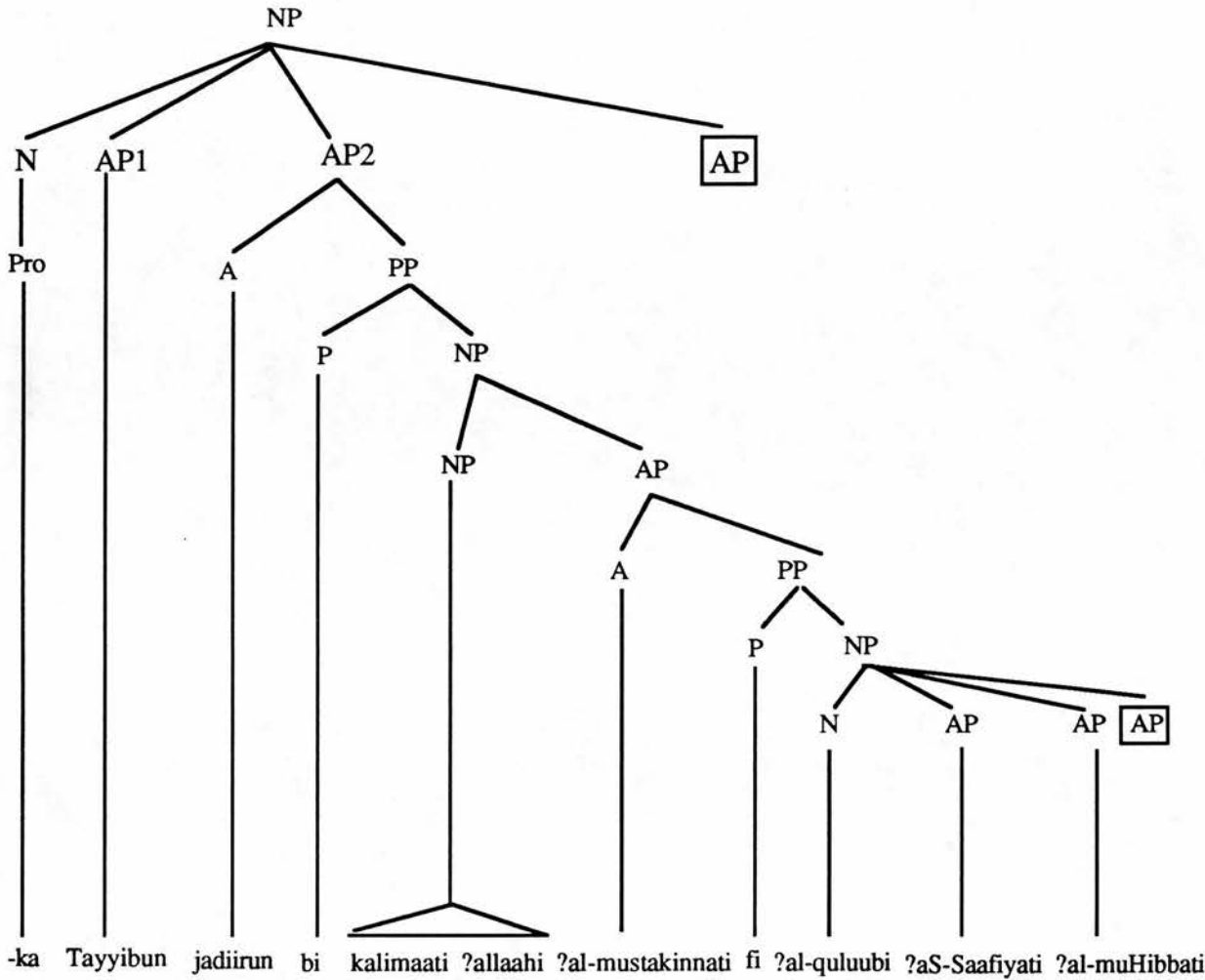


Figure (6) example (49.a)

Thus, when the comp-A is very heavy such as the AP2 in (49.a), as shown in Figure (6), above, the occurrence of a single unmodified adjective following the comp-A is acceptable when it does not modify the higher pronoun *-ka* "you M. Sg.". That is, no adjective can occur in either of the boxed APs in Figure (6) and modify the head *-ka* "you M. Sg." which is modified by the single unmodified adjective *Tayyibun* "good" (cf. AP1) and the heavy adjective *jadiirun* "worthy" (cf AP2). This is because of the fact that when an adjective follows the heavy adjective *jadiirun* "worthy" and occurs under either of the boxed APs, it cannot be interpreted to modify the same head *-ka* "you M. Sg.", even when the marking system plays a role in solving the resulting ambiguity.

If this is acceptable, it shows that expansion, i.e. adjective stacking in Arabic NPs must obey the "heaviness" principle since we can add any number of single unmodified

adjectives modifying *-ka* "you" as long as they precede the heavy AP2, in Figure (6). Therefore, example (49.b) (which is (49.a) repeated with single unmodified adjectives following the heavy one), in which the heavy AP includes 9 words, is asterisked.

Turning back to our example in (48), which is represented in Figure (7), below, the higher head N is the 3rd person Sg. pronoun *huwa* "he" and all the modifying adjectives (AP1, AP2 and the two under the boxed APs) are accusative and indefinite. Therefore, the single unmodified adjectives, *rafiican* "thin" or *Tawiilan* "tall" cannot be interpreted to modify the immediately preceding N, *?af-jacri* "the hair", which is, unlike these two adjectives, genitive and definite. That is, the difference in the case marking and in the definite article, makes it possible for such single unmodified adjectives to follow the heavy one. However, when the AP is very heavy, such as AP2 in Figure (6), the occurrence of a single unmodified adjective following the comp-A is not acceptable.

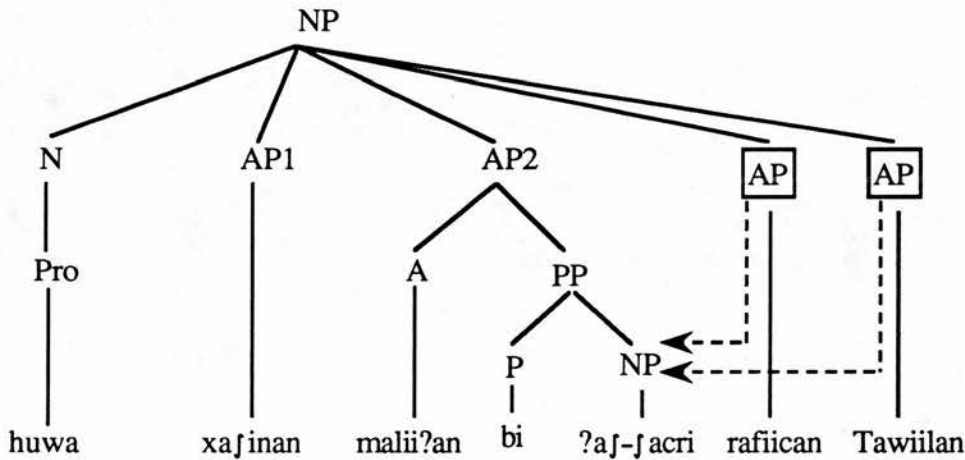


Figure (7) example (48)

Comparing AP2 in Figure (6) to AP2 in Figure (7) we see that the former is much heavier, i.e. while AP2 in Figure (6) includes 9 words and more branching nodes AP2 in Figure (7) includes only 3 words and fewer branching nodes. Thus, the heavier the AP the stronger the heaviness constraint. That is, the principle of heaviness cannot be violated

when the relevant constituent is very heavy but can be violated when the relevant constituent is not very heavy, as in (48). This is another reason, in addition to the marking of case and definiteness, for the acceptability of (48) and the unacceptability of (49.b).

To sum up, the following points have been discussed :

1. Comp-As are heavier than single unmodified adjectives, and, therefore, they occur further away from the modified head towards the end of the sequence.
2. The heaviness principle is very strong and applies to both attributive and predicative orderings. However, the exceptional cases seem to relate to the predicative rather than the attributive adjectives. The order is : Head N + Single unmodified A + comp-A
3. The exceptional examples also show that
 - a. The heavier the comp-A, the more difficult it is to violate the heaviness principle, and that
 - b. Violation of the heaviness principle seems to be licensed by the fact that the marking system seems to play an important role in solving ambiguity.

Since theoretically there is no limit to the number of constituents which can be included under comp-A, it will be argued in the next section, that comp-A is potentially heavier than construct-A, which does not allow any expansion; and in a hierarchy that includes both it should occur higher. With respect to their occurrences in our data this is true, i.e. the data show that when comp-A and construct-A cooccur in the same NP and modify the same head N the former follows the latter and occur towards the end of the structure. That is, the order they follow is Head N + construct-A + comp-A. If this is true, it means that we can postulate a hierarchy of "heaviness" similar to that of Hawkins (1983) along the following lines :

comp-A > construct-A > single unmodified A

The above hierarchy shows that the heaviest construction in Arabic adjectives is the comp-A, then comes the construct-A which is less heavy than comp-As but more heavy

than the single unmodified adjectives. Therefore, it is important to discuss the various items which are less heavy than comp-A. We will discuss the construct-A, in the next section, and in the following sections the single unmodified adjectives will be discussed.

7.4.1.3 The Order of The Construct-A :

The second type of heavy adjective is the construct-A. Like comp-A, they are heavy structures, and are assigned a position further away from the modified head N towards the end of the structure, following other single unmodified adjectives. However, the construct-A's differ from the comp-A's in the following respects :

1. Comp-A type includes only those adjectives which are potentially capable of taking a complement, i.e. Simple and Participial adjectives, excluding denominal adjectives. On the other hand, construct-A includes any type of adjective, i.e. the structure of construct-A can be introduced by Simple, Participial or denominal adjectives.
2. While comp-A allows recursiveness, construct-A does not allow recursiveness (see §2.3.1).

Theoretically there is no limit to the number of constituents which can be included under comp-A, therefore it is potentially heavier than construct-A

Our data show that the construct-A's cooccurring with various types of adjectives, like the comp-A's, are separated from the modified head N by the other adjectives. This seems to be highly preferable particularly in attributive occurrences (42 examples), as exemplified in (50). Predicative occurrences, on the other hand, generally follow the same constraint but are less preferred. There are 10 predicative occurrences which follow the same constraint, i.e. single unmodified adjective + construct-A, as exemplified in (51).

- 50.a haykalan Daxman [maTmuusa ?almacaalimi]
 altar huge obliterated the-sights

"A huge altar obliterated (in) the sights ..." (I70)

50.b jaabun ja~~aa~~abun qawiyyu ?al-malaamiHi

youngman attractive strong the-look

"An attractive youngman (with) a strong look ..." (A53)

51.a wa kaana qaasimu saciidan [xaaliya ?al-baali]

and was Qaasim happy empty the-mind

"And Qaasim was happy (with) an empty mind". (I415)

51.b fa ?af-jayxu naHiifun Daciifun [xafiidu ?aS-Sawti]

thus the-Shekh thin weak low the-voice

Thus, the Shekh is thin weak (with) low voice". (B63)

In the whole corpus there is only one exception in which a single unmodified adjective follows a construct-A, namely (53). Like the exceptional example in the comp-A occurrences, the exception in the construct-A occurrences is predicative not attributive. That is, attributive construct-A orderings seem to obey the heaviness constraint, which is relaxed for the predicative ones. That is, the heaviness constraint seems to be relaxed in the predicative adjective ordering structures not only in the construct-A but also in the comp-A, as we noted above. Now consider the following examples :

52.a * ?ila ?ar-rajul-i ?al-gariib-i [?al-jamiil-i ?af-jacr-i] ?al-?aswad-i

to the-man-GEN the-strange-GEN the-beautiful-GEN the-hair-GEN the-black-GEN

"To the strange man (with) beautiful hair black".

52.b haykalan Daxman [maTmuusa ?almacaalimi] jamiilan

altar huge obliterated the-sights

"A huge altar obliterated (in) the sights (and) beautiful ..."

53 kaana [mutawassiTa ?al-qaamati] [badiinan]

was middle the-height fat

"He was (with) middle height (and) fat". (I127)

In (52.a) the adjective *?al-?aswadi* "the black" follows the construct-A in brackets, i.e. immediately following the noun *?af-jacri* "the hair", which is genitive, definite, singular, and masculine. The problem in this example is that all the double-underlined adjectives and the higher underlined noun, *?ar-rajuli* "the man", have the same markers, i.e. occur in the genitive, definite, singular, and masculine. There are two possibilities : (a) that the final adjective *?al-?aswadi* "black" modifies the immediately preceding head N, or (b) that it modifies the higher head N *?ar-rajuli* "the man". We will argue, later in this section, that (a) is not possible while (b) is. This is because of some peculiar characteristics of the construction in which the construct-A occurs.

Although the possibility in (b) is plausible, i.e. that a single unmodified adjective follows the construct-A and modifies the higher N, *?ar-rajuli* "the man", such an order is very rare. That is why the structure in (52.a) is absent from the corpus. On the other hand, it is quite possible to find a structure in which a predicative single unmodified adjective follows a construct-A, particularly when the marker of the final adjective differs from the markers on the immediately preceding N. Such an example is (53), which actually occurs in our data. In (53), the single unmodified adjective *badiinan* "fat", is in the accusative, indefinite masculine, and follows the construct-A, *mutawassiTa ?al-qaamati* "middle height", in which the immediately preceding noun, *?al-qaamati* "the height", is genitive, definite and feminine. This clearly shows that the violation of this rule is in predicative occurrence and the marking system plays an important role. But notice that this is the only example found in the data which shows that our generalization, with respect to the heaviness principle, is very strong, particularly for attributive adjectives.

Moreover, an occurrence of an attributive adjective following the construct-A is not impossible when the agreement markers help to resolve the ambiguity. For example, Figure (8), which represents (52.b), which is (50.a) repeated with the single unmodified adjective, shows that the single unmodified adjective in the boxed AP, *jamiilan* "beautiful", can follow the construct-A construction in AP2 viz *maTmuusa ?al-macaalimi* "obliterated (in) the sights". Notice that such an example does not actually occur in our data. Figure (8) shows that the adjectives modifying the higher head *hykalan* "altar", are AP1, AP2 and the

AP in the box, and all are in the accusative singular indefinite. However, the NP in AP2, *?al-macaalimi* "the sights", is feminine genitive and definite. The difference in the marking system of the relevant agreement categories, between the adjective in the boxed AP and this noun, resolves the potential ambiguity. Therefore, the example is acceptable, but it is not preferable⁴². This nonpreferability is attested in the data in which only one predicative, rather than attributive example, is found, viz (53).

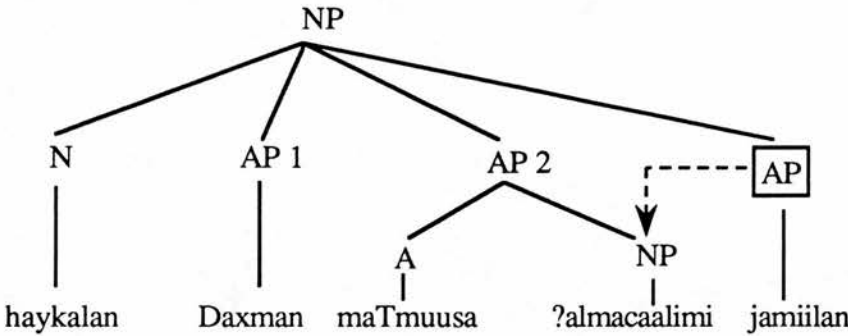


Figure (8) (example (52.b))

Now we turn to the problem related to the peculiar characteristics of the construct-As. It was observed in §2.3.1 where we discussed the construct phrase) that an adjective occurring as first member in the construct phrase, i.e. construct-A, attributes a quality to the following N. In (52.a), for instance, what is understood to be beautiful is not *?ar-rajul* "the man" but rather *?af-facr* "the hair". Therefore, any adjective modifying *?af-facr* "the hair" should precede it.

But notice that we always maintained that adjectives in the same sequence must modify the same head N, which always precedes them either attributively or predicatively. The construct-A seems to modify another N which follows it, but to agree with the same head N preceding it. Thus, in a sequence like NP[head N + A1+A2+A3+[construct-A]] we find A1,A2,A3, and the construct-A in the same sequence, and in the same NP. However, while A1,A2 and A3 modify the same head N which precedes them the construct-A modifies another N which follows it and occurs in the construct phrase. Therefore, we

have to solve this problem by either

- a. redefining our sequence of adjectives in order to allow other adjectives following the same sequence but modifying other head N to be considered as part of the same sequence.
- b. explaining the construct-A construction and finding a relationship through which we can consider the construct-A as a modifier of the same head N.

We will not take the first solution because it will allow any adjective to be included in our sequence, a result not favoured. We will take the second and show that while the construct-A attributes a property to the following noun, which follows it in the construct phrase, the same noun functions as a "modifier", or to use the same traditional term applied to the N1+N2 construction of the same kind, *?ixtiSaaS* "specification", which can be seen as N2 restricting the preceding N1 and which can be extended to the same construction when introduced by an adjective. That is, both members in the construct phrase [A+N] attribute a "specification" to one another, i.e. the adjective modifies the noun and the noun adds some "specification" to the adjective. This interpretation is not completely impossible since it is furnished by the following facts :

1. The construct-A construction is called by the traditional Arab grammarians *?iDaafah gayr Haqiqiyah*, which Wright (1896 Vol II : 198) calls "improper annexation". Wright also calls the noun following such adjectives "restrictive" or "limitative genitive" since it limits the preceding adjective (cf. Wright 1896 Vol II : 221).

2. In the construct-A construction the noun following the construct-A can occur with a suffix pronoun referring back to the higher head N (see §2.3.1, particularly examples 38 and 39). Notice that this pronoun cannot refer to any other noun but the same head N, i.e. the suffix pronoun attached to N2, in the following representation, must refer back to N1 : Head N1 + A1+A2+A3+ [A4+N2].

3. The "limitative genitive" noun in the construct-A construction relates not only to the immediately preceding adjective but also to the preceding head N, and is therefore generally interpreted with a possessive pronoun attached to it and refers back to the main head N, as shown in (56.a) and (56.b), which correspond to (54.a) and (54.b) respectively. It can also

be interpreted by employing a noun which conveys "the idea of possession, companionship, origination, etc." (cf. Wright 1898 Vol II : 202), as shown in (56.c) where *ʔuu* "of, possessor" occurs. Nouns like *ʔuu* "possessor", *SaaHib* "possessor", are "quasi-adjectives, when actually in apposition to a substantive, are placed after it, like real adjectives" (cf. Wright 1898 Vol II : 203).

4. The two members of the construct-A form a unit, i.e. no other adjective or intensifier can intervene between the two members (except in the case of the Participial adjective).

5. Although the construct-A modifies the following noun, it agrees with the higher head noun, rather than with the modified one (see §2.3.1).

To take fresh examples consider the following :

- 54.a xaadiman ʔaswadan [taciisa ʔal-manZari]
 servant black sad the-look
 "The black servant (with) sad look ...". (I499)
- 54.b fatan ʔamrad [qawiya ʔal-bunyati]
 boy hairless strong the-body
 "A boy hairless (and with) strong body". (D287)
- 55.a kaana ʔaSfaran jaaHiba ʔal-lawni tamaaman
 was yellow pale the-colour very
 "He was yellow (and with) very pale colour". (F96)
- 55.b *kaana ʔaSfaran jaaHiba tamaaman ʔal-lawni
 was yellow pale very the-colour
- 55.c *kaana ʔaSfaran jaaHiba ʔal-lawni ʔal-gaamiqi
 the-dark

In the above examples the single-underlined items form a unit which cannot be separated. Therefore, the double-underlined intensifier *tamaaman* "very", in (55.a), occurs after the construct phrase rather than immediately following the adjective *jaaHiba* "pale". When the intensifier separates the two members in the construct phrase as in (55.b) the

result is ungrammatical, therefore, (55.b) is asterisked. Moreover, since the construct phrase forms a unit no more than one adjective can modify the second member in the construct phrase. That is, in (55.c), which is (55.a) repeated with an adjective replacing the intensifier, although the underlined adjective, *?al-gaamiqi* "the dark" matches the immediately preceding noun *?al-lawni* "the colour", i.e. agrees with it in terms of the agreement features, it cannot be construed to modify it. In other words, the construct phrase, which is introduced by an adjective cannot contain more words than the comp-A construction, which means that the construct-A is not subject to expansion, and is potentially less heavy than the comp-A, which can be expanded (we will come back to this point at the end of this section and provide more examples). This point is crucial to our discussion when we suggest that Arabic adjectives form a hierarchy from heaviest to lightest.

In (54.a), for example, the first member in such a unit, is the adjective *taciisa* "sad" and the second member is the noun *?al-manZari* "the colour". The modified head *xaadiman* "servant" is modified by the adjective *?aswadan* "black". Therefore, we have two constructions : *xaadiman ?aswadan* and *?al-manZari ?at-taciisi*. It is generally suggested that the latter structure is interpreted as in (56.a), (56.b) or (56.c) :

56.a *xaadiman_J ?aswadan [manZara-hu_J taciisun]*

servant black look-his sad

"a black servant whose sad look".

56.b *fatan ?amradan_J [bunyata-hu_J qawiyyatun]*

boy hairless body-his strong

"a hairless boy whose strong body".

56.c *fatan_J ?mradan *ʔuu_J* buniyatin qawiyyatin*

boy hairless of body strong

"A hairless boy possessing a strong body".

(56.a) and (56.b) correspond to (54.a) and (54.b) respectively, and (56.c), which corresponds to (54.b) shows another kind of interpretation employing the noun *ʔuu*

"possessor". The above interpretations, in (56.a-56.c) show that the possessive pronoun -*hu* "his", in (56.a), for example, must refer back to the head N *xaadiman* "servant" which is modified by the adjective *?aswadan* "black". (56.c) generally means the same as (56.b) but interpreted with the noun *huu* "possessor", rather than with the possessive pronoun -*hu* "his". In both cases, both words must refer back to the same higher head N.

It is because of this, we think that the bracketed phrase *manZara-hu taciisun* "whose sad look", in (56.a), for example, is a modifier to the same head modified by the adjective *?aswadan* "black". Therefore, our proposal above, that the construct phrase modifies the same higher head N is plausible. Moreover, this proposal explains many peculiarities related to such a construction :

1. It explains the problem related to the position of the Arabic adjective with respect to its head, i.e. the sequence is always N+A. This explains the occurrence of the construct-A preceding the head it modifies since both members in the construct phrase modify the higher head N. This can be shown in Figure (9) which represents (54.a).

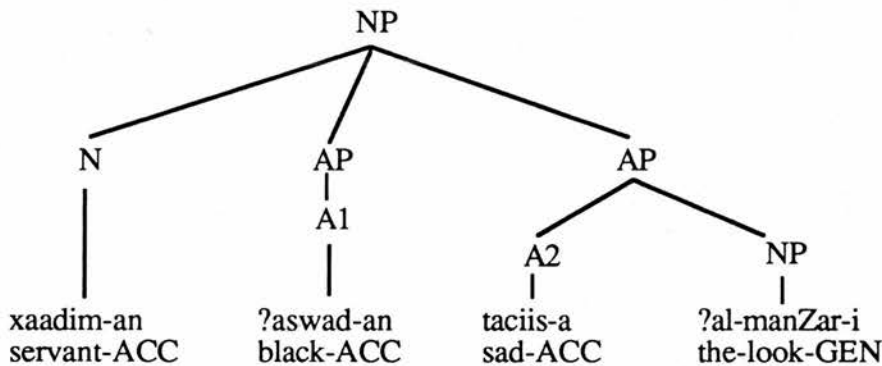


Figure (9)

Figure (9), above, shows that the head N *xaadiman* "servant" and the following two adjectives, A1 and A2, are also in the accusative. What is understood to be black is the *xaadim* "servant". However, it is not understood to be *taciisa* "sad" because this adjective attributes a property to the following noun *?al-manZa-ri* "the look". That is, the example should be interpreted as "a black servant whose sad look ...". But notice that although the adjective *taciis-a* "sad-ACC" is modifying

?al-manZar-i "the look-GEN" it agrees with the higher head N *xaadiman* "servant".

Therefore, we suggest that both members in the construct phrase modify the higher head N.

2. It explains the problem related to agreement between the head N and the adjective. In the construct-A the adjective modifies the following noun and agrees with the higher head noun which precedes it. That is, the adjective plays double roles in modifying a noun and agreeing with another. By suggesting that both members in the construct phrase modify the higher head N this peculiarity is resolved.
3. It explains why an intensifier cannot immediately follow the construct-A but must follow the whole construction, i.e. the adjective and the modified noun which follows it as in (56.c)

Since we demonstrated how our proposal works and because of the above reasons supporting this proposal, we think it is plausible to consider the construct phrase, which is introduced by an adjective, i.e. the construct-A, as modifying the preceding head and thus occurring in the same sequence along with the other preceding adjectives.

The final point which I would like to address relates to the fact that the comp-A is potentially heavier than the construct-A. While the former allows more adjectives to occur in the structure, the latter forms a unit which cannot be separated or expanded. If this is true we would expect that when both cooccur modifying the same head N the comp-A would appear further away from the head N towards the end. Although examples showing this are very rare they prove the point. Consider the following examples.

57.a ?ila jaziiratin_{AP1} [fayHaa?]_{AP2} [muctadilati ?al-jawwi]
 to island pleasant mild the-weather

_{AP3} [ganiyyatun bi ?aθ-θimaari wa ?al-jadaawili]
 rich with fruits and streams

"To a pleasant island mild (in) weather (and) rich with fruits and streams".

(D275)

57.b sayyidatun AP1[jadiidatu ?al-?anaaqati]

lady complete the-elegance

AP2[mundamijatun fi Hadiiθin xaTiirin maca zabuunin]

engaged in conversation dangerous with customer

"A lady (with) complete elegance engaged in a conversation with a customer ...".

(F61)

In (57.a) there are three adjectives. The one which immediately follows the modified head N *jaziiratin* "island" is single unmodified followed by two heavy adjectives viz *muctadilati* "mild" and *ganiyati* "rich", respectively. AP1 is a single unmodified adjective, therefore it precedes both AP2 and AP3. AP2 and AP3 are heavy adjectives of the types construct-A and comp-A, respectively. The two heavy adjectives also vary with respect to heaviness and are ordered accordingly. The construct-A, occurring in AP2, *muctadilati ?al-jawwi* "mild (in) whether" contains only two words, and, therefore, follows the single unmodified adjective *fayHaa?* "pleasant" and precedes the heavier structure in AP3, *ganiyatun bi ?aθ-θimaari wa ?al-jadaawili* "rich with fruits (and) streams", which belongs to the comp-A type, and contains more words. It is also important to note that while the less heavy structure of the construct-A does not allow expansion the heavier structure of comp-A does. This makes the former potentially less heavy, i.e. the comp-A type is potentially heavier since the number of words which could be involved is theoretically unlimited. Therefore, the heavy structure of comp-A follows the less heavy one of the construct-A. Similar observation is applied to (57.b) in which the AP1 contains only two words while AP2 of the comp-A is even heavier than its corresponding comp-A in (57.a) since contains 6 words. This clearly shows that construct-A is potentially less heavy than comp-A.

To sum up, the following points have been discussed :

1. The heaviness principle accounts for the ordering of the construct-As and places them further away from the modified head noun towards the end.
2. The construct-A is less heavy than the comp-A because it forms a unit which does

not allow any expansion.

3. The heaviness ordering of the construct-A is very strong in the attributive occurrence, and applies to the predicative ones but with less frequency.
4. The exceptional examples found in the data seem to be in the predicative rather than the attributive, and the marking system plays an important role in making the construction acceptable.
5. The construct phrase which is introduced by the construct-A modifies the same higher head N, and, therefore, the construct-A is considered in the same sequence along with the other preceding adjectives.

7.4.2 Arabic Nonheavy Adjectives

The set of Arabic nonheavy adjectives corresponds to the single unmodified denominal, Participial and Simple adjectives. This section discusses these three single unmodified adjectives. It will be argued that the criterion of noun-likeness, which is found in the literature of adjective ordering, can be applied to Arabic in order to account for the single unmodified adjective ordering. The noun-likeness principle, which should not be considered as absolute, predicts that in a sequence of various single unmodified adjectives the denominal will appear close to the head N followed by the Simple or the Participial adjective. The data provide ample examples in support of this ordering principle. Thus, the simple generalization which will be drawn is

- (i) Head N + Denominal A + {Simple A or Participial A}

The noun-likeness criterion predicts the ordering of denominal adjectives relative to Simple and Participial adjectives. The ordering of Simple and Participial adjectives relative to one another is determined by the verb-likeness criterion. We propose that the Participial adjective, unlike the Simple adjective, takes more complement and, particularly active, can take an accusative NP complement. Because of that the Participial adjective is considered as more verb-like than the Simple adjective. This piece of information will be joined into the

above generalization in order to account for the ordering of the final two items viz Simple and Participial adjectives. It will also be noted that the two features viz noun-likeness vs verb-likeness form a continuum along which the Arabic adjectives can be placed in various positions.

It will be shown how the heaviness principle, as discussed earlier, will interact with the various single unmodified adjectives. It will be argued that when a heavy adjective occurs in a sequence the order is Head N + comp-A + construct-A + Single unmodified A. Therefore, a hierarchy of heaviness will be postulated which predicts the relevant ordering as below :

comp-A > construct-A > Single unmodified A

There will also be discussion of how this hierarchy interacts with other ordering principles such as the noun-likeness and the verb-likeness criteria.

Finally it will be demonstrated that there are some weak tendencies which can account for the various semantic types of Simple adjectives.

7.4.2.1 The Nounlikeness Principle⁴³:

The importance of the concept of the "nounlikeness"⁴⁴ stems from the fact that our data show that denominal adjectives, which in certain respects (cf. having no corresponding nominalized forms, having a corresponding noun base, rejecting intensifiers, and occurring mainly attributively) behave like nouns generally appear close to the modified head than other adjectives. This observation is not new. A number of linguists have observed that the more noun-like adjectives occur close to the modified head noun and try to explain how such adjectives are noun-like.

For instance, Bever (1970 : 324) notes that the adjectives such as *plastic* occur closer

to the modified noun than Size or Colour adjectives. He also remarks that when Colour and Size adjectives cooccur the former will appear closer to the modified head noun :

- 58.a the red wooden box
- 58.b * the wooden red box
- 59.a the large red box
- 59.b * the red large box
- 60.a the large wooden box
- 60.b * the wooden large box
- 61.a the large red wooden box

The examples in (58-61) show that with neutral stress the order of prenominal adjectives is constrained. There are several theories (Martin 1968, cf. Vendler 1968 : 127-128) which state that adjectives are ordered according to the extent to which an adjective refers to a 'substantive concrete' quality of an object (Martin) or to which it relates lexically to a noun (Vendler)⁴⁵. Martin (1968) observes a more semantic basis for a scale of 'noun-likeness' of adjectives. He remarks that denominal adjectives such as *wooden* refer to the concrete 'inner' structure of the entity denoted by the modified noun whereas Colour adjectives like *red*, for example, refer to the exterior of the entity denoted by the noun they modify. He also notes that Size adjectives refer to the properties of the objects they modify which must be assessed by the speaker relative to other objects of that type.

Thus, the more 'noun-like' an adjective is (on either of these two measures), the closer to the noun it must be. Therefore, following Vendler, Bever (1970 : 324) argues that a denominal adjective like *wooden* is more like a noun than *red* in the sense that it occurs in more kinds of constructions as a noun than does *red*. In the same way, Colour adjectives occur in more constructions as nouns than Size adjectives. Therefore, Bever (1970 : 325) states that "in a series of prenominal adjectives, the more noun-like adjectives are ordered to be closer to the head noun they all modify". Bever provides the following examples to support the "nounlikeness" concept.

- 62.a Red is a colour; redness is nice.
- 62.b Plastic is a substance' plasticity is nice.
- 62.c *That is made out of red.
- 62.d That is made out of plastic.
- 62.e *The red broke.
- 62.f The plastic broke.
- 62.g ?Reds are of variable quality.
- 62.h Plastics are of variable quality.

Bever claims that the above examples show that the more noun-like adjective *plastic* occurs in more constructions as noun than does the less noun-like adjective *red*. Therefore, *plastic* is more like-noun than *red*. Clearly Bever's examples cited in (62) can be countered by just using the adjective *wooden*, which is a noun-like one, instead of the adjective *plastic* in (62.b) and (62.h). This shows that Martin's suggestion is superior because it can account for more items, i.e. for example both *wooden* and *plastic* refer to the concrete inner structure of the noun *box* in (58). Therefore they can precede Colour adjectives. Moreover, examples like (62.b) and (62.h) would cause no problem for Martin's proposal. Bever also argues that *red* is more noun-like than *large*, and, therefore, it occurs closer to the modified head N. He cites the following examples :

- 63.a Red is my favourite colour.
- 63.b *Large is my favourite colour.
- 63.c He splattered some red on me.
- 63.d *He splattered some large on me.
- 63.e Red and blue and green are colours.
- 63.f ?Large and enormous and tiny are sizes.

In (63) the Colour adjective *red* occurs in more constructions than the Size adjective *large*. Therefore Bever (1970 : 325) asserts that :

"Whichever metric of 'nounlikeness' is used, the syntactic constraints on prenominal adjective ordering principle is expressed the same way : in a series of prenominal adjectives, the more nounlike adjectives are ordered to be closer to the head noun they all modify".

Similar discussions are also found in Martin (1969b), Danks and Glucksberg (1971), and Danks and Schwenk (1972, 1974) who propose a semantic rule for adjective ordering based on the qualities referred to by the adjectives : "definiteness", "absoluteness", or "intrinsicness". Thus for instance, in comparison to Size, Colour is more definite in meaning, changes less from object to object (absoluteness), and is considered a more intrinsic property of the object. Absoluteness is defined by Martin (1969b) in terms of "comparisons you would have to make among a class of objects before you could choose ... the adjectives". The adjective *yellow*, for example, refers to a certain range of wavelengths, independent of whether the object is a house or a chair, i.e. one would not need to make a comparison between houses to decide whether a given one was yellow but would need to compare at least two houses of different sizes to decide whether one was large, because a large house is a very different size than a large chair. Therefore, the more absolute or definite the adjective, the stronger the tendency to place it closer to the noun.

Danks and Schwenk (1972) observe that Martin's absoluteness and definiteness criteria can be incorporated into a dimension of their "intrinsicness" feature. Thus adjectives denoting properties relatively intrinsic to the noun, hence, less informative, are ordered closer to the noun. They are preceded by those adjectives that denote properties (such as Size adjectives which are determined in relation to other objects, rather than being inherent in the object), which are more useful for distinguishing among subclasses of the noun, more useful because they are more likely to vary between instances of that particular noun. For instance, it is said that the adjectives of Size discriminate among nouns more than Colour, and, therefore, they are more "informative" than Colour, and generally precede in prenominal attribution. Therefore, "the more intrinsic the relation between adjective and noun, the less likely the adjective will be used to discriminate the noun referent from others

in its subcategory" (cf. Danks and Schwenk 1972). Consequently, adjectives which do discriminate tend to occur first in a sequence of adjectives.

Although we think that the concept of "nounlikeness" is useful, we do not think that it should be applied to Arabic without any change in the relevant features. That is, the noun-likeness principle, particularly Martin's, which is applied to English, can be extended to Arabic (see below) taking into consideration other features which show that both Arabic denominal adjectives, which we claim are noun-like, and nouns have some syntactic and semantic features in common. The following features must be taken into consideration when applying the "noun-likeness" principle to the Arabic data :

1. whether the form is derived from corresponding noun by the denominal suffix *-iyy*.
2. whether the form is ungradable.
3. whether the form occurs mainly attributively rather than predicatively.
4. whether the form does not nominalize.
5. whether the form takes a complement

Most denominal adjectives and prototypical nouns in Arabic are generally characterized by these features. The features in 1-4 are discussed in detail in Chapter VI (see §6.5.1 to §6.5.4). Denominal adjectives, unlike Simple and participial adjectives, are derived from a noun base by the denominal suffix *-iyy*. They generally do not nominalize since they are "noun-like" and they are not generally gradable. We also noted that they generally occur attributively rather than predicatively. Finally, they generally do not take complements, as shown in the data (see §7.3 and §7.4.2.2). Because of all these features, Arabic denominal adjectives are thought to be "noun-like", and therefore, they generally occur close to the modified head noun in a sequence of adjectives.

But it must be noted that there are some adjectives which take the suffix *-iyy*, and which by the morphological criterion are considered as noun-like. Adjectives like, *Darur-iyy* "necessary" or *cabqar-iyy* "smart", for instance take the denominal suffix *-iyy*, however, they occur predicatively (cf. predicating) and also accept modification by

intensifiers like *jiddan* "very". Therefore, when they occur in a sequence they may appear further away from the modified head N as in (64).

- 64.a *haaʔa ʔaS-Saamita ʔal-cabqar-iyya*
 this the-silent the-Cabqar-Den
 "This silent smart person from Cabqar"⁴⁶. (F73)
- 64.b *ʔar-rajulu cabqar-iyyun jiddan*
 the man smart very
 "The man is very smart".

(64.a) shows that although the denominal adjective *ʔal-cabqar-iyy* "the smart" takes the suffix *-iyy*, and therefore, is more noun-like than the preceding adjective *ʔaS-Saamita* "the silent", it occurs further away towards the end of the sequence. However, since such an adjective occurs predicatively, accepts modification by intensifiers, and can be nominalized, it is not more noun-like than the preceding Simple adjective. This, of course, shows that the morphological criterion, although useful, is not as strong as the other criterial features. This, however, does not reduce the importance of the noun-like principle.

7.4.2.2 The Order of Denominal Adjectives :

The data show that there are 219 examples in which a denominal adjective occurs in a sequence. These occurrences can be presented as follows :

Cooccurring Single unmodified Denominal Adjectives		
Type of Sequence	No. of occurrences	Percentage
1. Head N + Den + A	177	81
2. Head N + A + Den	22	10
3. Head N + Den + Den	20	9
Total	219	100

Table (7)

The above statistics show that when a single unmodified denominal adjective occurs in a sequence, it generally precedes other adjectives and appears close to the modified head N. This order seems to be preferable in 81 percent of the total occurrence of the denominal adjectives in a sequence. But since the ordering in (3), in Table (7), as exemplified in (65), is irrelevant, we will exclude it, i.e. the total number of occurrences will be 199 (177+22=199). Therefore the ordering of denominal adjectives seems to be preferred in 90 percent when they occur with other types of adjectives.

- 65.a wa cuyuuni-ha ?al-casal-iyyati ?al-miSr-iyyati
 and eyes-her the-honey-DEN the-Egypt-Den
 "And her honey-like Egyptian eyes". (B24)
- 65.b tanaaθara min-ha masHuuqa-ha ?al-xamr-iyyu ?an-nuHaas-iyyu
 spread from-her powder-her the-wine-DEN the-copper-DEN
 "Her wine-like copper-like powder spread from her". (C135)

In 22 examples the denominal adjective is separated from the head noun. In 20, i.e. 91 %, of those examples the denominal adjective is separated from the head N by a Simple adjective; in 2 of those examples, i.e. 9 %, the denominal adjective is separated from the head N by a Participial adjective. In other words, in the exceptional 22 examples, what seems to precede the denominal adjective is mainly Simple, rather than Participial adjectives. This, if acceptable, means that even in the exceptional cases there is a strong tendency which prevent the most verb-like adjectives, the Participials, from preceding the least verb-like adjectives, the denominal ones. That is, the noun-like criterion may allow the less verb-like adjectives, such as *?amiinatin* "save", rather than the more verb-like adjectives, such as *mutaDaaribatun* "divided", to precede the denominal adjective, as shown in (66.a-66.b), respectively.

- 66.a fi kurraasatin AP1[?amiinatin] AP2[sirr-iyyatin]
 in booknote safe secret-DEN
 "In a safe secret booknote". (I515)

66.b tayaaraatun AP1[mutaDaaribatun] AP2[diin-iiyyatun]

trends divided religion-Den

"divided and religion-like trends". (K59)

(66.a) represents some examples in which the denominal adjective follows, rather than precedes other adjectives. Thus the Simple adjective *?amiinatin* "save" occurs closer to the head N *kuratin* "ball" than the denominal adjective *sirriyyatin* "secret". (66.b) is an example of the other two exceptional cases, in which a Participial adjective, such as that in AP1, precedes the denominal adjective, such as that in AP2. This shows that although the noun-likeness principle is very strong it is not as strong as the heaviness principle, which has much fewer exceptional cases. Therefore, this principle should not be treated as absolute.

The noun-likeness principle, as discussed in §7.4.2.1, accounts nicely for the cooccurring denominal adjectives. It states that the noun-like adjectives generally occur close to the modified head noun preceding the other types of adjectives namely Simple and participial. Thus, in a sequence of various adjectives which includes a denominal, the denominal will occur close to the modified head N preceding the other adjectives. The data show that this is the case in 89 percent of the such sequences. Examples showing this sequence are given in (67) and (68), below.

67.a min ?af-jaarici AP1[?at-tjaar-iiyyi] AP2[?al-kabiiri]

from the-street the-commerce-DEN the-big

"From the big commercial street". (D12)

67.b ?al-baabu AP1[?al-xafab-iiyyu] AP2[?al-catiiqu]

the-door thewood-DEN the-old

"The old wooden door". (H112)

67.c sataktasibu Sifatan AP1[damaw-iiyyatan] AP2[gariibatan]

gain character blood-DEN strange

"You will gain a strange bloody character". (G100)

- 68.a ?ila ?aT-Turuqi _{AP1}[?al-farc-iyyati] _{AP2}[?al-munHaniyati]
 to the-roads branch-DEN the-curved
 "To the curved branch-like roads, i.e. to the curved tributary roads". (F78)
- 68.b ka wiHdatin _{AP1}[?insaan-iyyatin] _{AP2}[mustaqillatin]
 like unit human-DEN separated
 "Like a separated human unit". (B105)
- 68.c fi Hujratin _{AP1}[taHt-aaniyyatin] _{AP2}[muglaqatin]
 in room bottom-DEN closed
 "In a closed bottom-like room, i.e. in a closed room downstairs." (G21)
- 68.d bi waraqatin _{AP1}[maal-iyyatin] _{AP2}[muftacilatin]
 with paper money-DEN burning
 "With a burning monetary paper (banknote)". (C42)

In each of the AP1 in (67) and (68) there is a denominal adjective occurring next to the modified head noun, and followed by a Simple adjective in AP2 of the corresponding examples in (67), and by a Participial adjective in AP2 of the corresponding examples in (68). In (67.b), for instance, the denominal adjective in AP1, *?al-xaʃab-iyyu* "the wooden" occurs next to the head noun *?al-baabu* "the door", and precedes the Simple adjective in AP2, *?al-catiiqu* "the old". In (68.a) the denominal adjective in the AP1, *?al-farc-iyyati* "the tributary" precedes the Participial adjective in AP2, *?al-munHaniyati* "the curved". This order is very frequent and occurs in 89 percent of the relevant examples. Thus, the simple generalization we draw from these examples is that the general order of single unmodified adjectives is :

- (a) Head N + Noun-like A + Simple A or Participial A

While the generalization in (a) predicts the position of the noun-like adjectives (cf. denominal), it does not tell us about the order of the second two adjectives, if they occur in the same sequence. The data show that when three single unmodified adjectives occur in the same sequence the order is as in (b) :

69.f Hayaatun_{AP1} [zawj-iiyyatun_{AP2} [miθaal-iiyyatun

life marriage-DEN type-DEN full

_{AP3} [mawfuuratun bi zuhuuri ?al-?iimaani]

full of flowers the-belief

"A marriage-like life full of the flowers of belief".

(E15)

While in each of the AP1 in (69) there is a denominal adjective next to the modified head noun, in each of the corresponding AP2 (and) AP3 there is a verb-like adjective, either Simple or Participial. We will come back to (69.b-69.f). (69.a) shows that the normal order is the same as that in generalization (b). In (69.a) in AP1 there is the denominal adjective *zawj-iiyyatin* "marriage-like" followed by the Simple adjective in AP2, *saciidatin* "happy", and the Participial adjective in AP3, *muntaZimatin* "expected". Thus, when the noun-like adjective occurs with the verb-like ones, it precedes. Thus we may modify the generalization in (b) along the following lines :

- (c) In a sequence of various types of adjectives the more noun-like (denominal) occur close to the head N followed by the more verb-like adjective (Simple) and then comes the most verb-like adjective (Participial).

The Participial adjectives are more verb-like than the Simple adjectives since they take more complements, and since they, particularly the active ones, can take an accusative NP complement. From a statistical point of view, the data show that the participial adjectives occur most frequently in the heavy structure of the comp-As, i.e. 84 % of such occurrences are Participial adjectives. The data also show that Simple adjectives participate in 16 % of the comp-As. (see §7.3). These two types are the verb-like adjectives as opposed to the denominal adjective which is a noun-like one. Therefore, it is plausible to suggest a continuum, which is based on the noun-like principle and on the statistical results found in our data with respect to the adjective complementation. This continuum, which corresponds to (c), shows the general positions of various single unmodified adjectives as follows⁴⁷ :

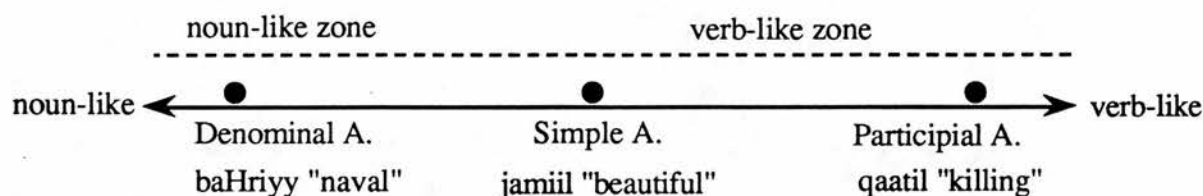


Figure (10)

Although the above continuum has some exceptions, they provide indirect evidence for the accuracy of the above representation. On the basis of the above discussion it will be generalized that when a sequence of Arabic single unmodified adjectives of various types occur in the same NP the more noun-like adjectives (denominal) occur close to the head N followed by the more verb-like adjectives (Simple) and then comes the most verb-like adjective (participial). The continuum in Figure (10) above corresponds to Figures (6 and 8) in §2.2.1 and 2.2.2 in Chapter II, where we noted that the Participial adjective is verb-like since it has some verbal features whereas the Simple adjective is characterized by central adjective features, and therefore less verb-like. Other supporting evidence as to the correctness of the above continuum is as follows :

i. In the above continuum Simple adjectives are placed closer to the head N than Participials, therefore, we would expect to find boundary cases that straddle the boundary between the zone of verb-like and that of the noun-like, i.e. to precede the noun-like adjectives. This is exactly the case. The data show, as discussed above, that there are 22 examples in which a verb-like adjective precedes a noun-like adjective. Only 2 are Participial adjectives and the rest are Simple adjectives. This shows that the two extremes of the continuum, are clearly distinguished from each other and explains why we find fewer examples in which a Participial adjective precedes a denominal adjective.

ii. The "heaviness" principle as discussed §7.4.1.1 correlates nicely with the types and positions of the above adjectives. It is generally accepted that in a string of various constituents the heavy ones are placed towards the end following the lighter constituents.

Turning back to (69), the rest of the examples, i.e. (69.b-69.f) involve various types of heavy adjectives occurring with single word adjectives. All these examples show that the

noun-likeness principle is in accordance with the heaviness principle. For example, in (69.e) the noun-like denominal adjective *macdan-iiyyatin* "metallic" occurs in AP1 next to the modified head N, and followed by the Participial comp-A adjective *muwaffaatin* "decorated". The same is true for (69.f); however, there are two denominal adjectives, in AP1 and in AP2, preceding the comp-A adjective in AP3. The examples in (69.b-69.d) also show the same ordering where the adjectives in the AP3 of these examples are also heavy, but those in (69.b-69.c) are comp-A, and that in (69.d) is construct-A. All these heavy adjectives whether comp-A or construct-A occur further away from the head N, following the corresponding noun-like denominal adjectives. Therefore, we may state the following generalization :

- (d) Head N + noun-like A + heavy A.

But notice that in example (69.d) the denominal adjective in AP1 is followed by two Simple adjectives, in AP2 *?ajaffun* "hoarse, and in AP3 *galiizu* "rough". However, the one which is immediately following the noun-like adjective is a single unmodified whereas that last one , in AP3, is a heavy adjective of the construct-A type. Therefore, the above constraint in (c), should be modified in order to account for this example. such modification should be focused on the heaviness principle, which is applied earlier in order to account for the Arabic cooccurring adjective. Notice that the heaviness principle is related to the "verb-like" concept since the verb-like adjectives (Simple and participial) occur in 100 percent of the comp-A structures. Thus although the constraint as stated in (c) is valid, the one stated in (d) is superior since it accounts for the various types of examples found in our data such as (69.d).

However, (d) needs to be extended in order to account for Simple and Participial single unmodified adjectives. The extension to the constraint in (d) is related to its second part, i.e. the heavy adjectives, which can be divided into two types according to which the less potentially heavy precedes the most potentially heavy :

1. the less potentially heavy (Simple adjectives)
2. the most potentially heavy (participial adjectives)

Thus the constraint in (d) can now be stated as in (e)

- (e) When three or more adjectives of various types cooccur, the noun-like (denominal) one appears close to the head N followed by the potentially less heavy adjective (Simple) and finally comes the most potentially heavy adjective (participial).

Thus there are mainly two zones : the first zone which is close to the head N is that of the noun-like adjectives followed by the second zone, which includes two potentially heavy adjectives namely Simple and participial adjectives.

However, the generalization in (e) does not account for examples such as (70), which is discussed in (§7.4.2.3). (70) shows that a single unmodified Participial adjective precedes the comp-A Simple adjective. Thus the generalization in (e) should be modified, particularly its second part, in order to account for examples like (70), i.e. in (70) the Participial adjective in AP1, *mutamaasikatan* "connected", is potentially more verb-like than the Simple adjective in AP2, *xaliiqan* "appropriate".

70. wiHdatan_{AP1}[mutamaasikatan] AP2[xaliiqatan bi muwaajahati ?aJ-fiddati]
 unit connected appropriate for facing the-difficulties
 "A connected unit appropriate for facing the difficulties". (I180)

This problem seems to stem from the fact that we are trying to account for the data by one generalization. In other words we are trying to put together under one generalization both single unmodified adjectives (denominal, Participial and Simple) and heavy adjectives (construct-A and comp-A). Therefore, we will suggest to separate them and postulate two generalizations to account for the ordering of the Arabic adjectives. Consequently we will suggest the following hierarchy of heaviness which is claimed to account for the adjective ordering when a heavy adjective is present in the sequence :

- (f) Comp-A > Construct-A > Single unmodified A

The hierarchy in (f) predicts that single unmodified adjectives are the least heavy type,

and, therefore, they will occur closer to the modified head N. It also predicts that when two heavy adjectives occur in the same sequence the construct-A will precede the comp-A since it is less heavy. But it makes no predication about the ordering of the various types of single unmodified adjectives when they occur in the same sequence. We need generalization (c) which holds the possible hierarchic ordering of various adjectives that belong to its lowest level of heaviness, viz. single unmodified adjectives)

(c) does not state any thing about whether a member is heavy or not. Moreover, examples like (69.d) are accounted for by (f) rather than by (c). Thus, if a sequence involves a heavy adjective, we apply (f), if not we apply (c). Thus the general order of Arabic adjectives when all various types are present in a sequence is as follows :

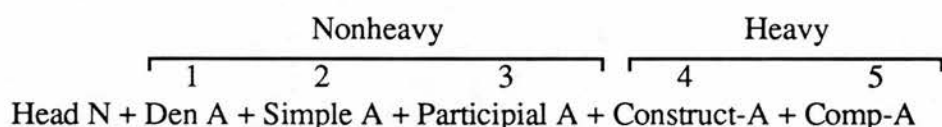


Figure (11)

We have seen how members in the nonheavy type are ordered and how members in the heavy type are ordered (a discussion of the order in 2 and 3 is in the following section). There is no example in our data with all the five types in one sequence. The closet example is (71).

71.a hulaaman _{AP1}[Dabaab-yyan] _{AP2}[ramaad-yyan] _{AP3}[mutagaamiqan]

jelly fog-Den ash-Den darkened

_{AP4}[mu?adin ?ila ?as-sawaadi ?al-kaamili]

leading to the-darkness the-complete

"A fog-like ash-like darkened (and) leading to the complete darkness, i.e. a jelly (which is) ashy foggy darkened (and) leading to a complete darkness". (B87)

In (71.a) AP1 and AP2 belong the the denominal adjective corresponding to (1A), in Figure (11), AP3 belongs to the Participial adjective and corresponds to (3A), and AP4

belongs to the comp-A adjective and corresponds to (5B). Therefore we can state that the Arabic adjective ordering is accounted for by two generalizations, namely (c) and (f). But before we close this section it must be noted that in (71.a) there are 4 adjectives occurring in a sequence, however, this does not affect their order, i.e. the above order does not change even if we add more adjectives as in (71.b), or if we have only two adjectives, as in (71.c).

71.b hulaaman _{AP1}[Dabaab-yyan] _{AP2}[ramaad-yyan] _{AP3}[qabiiH]

jelly fog-Den ash-Den ugly

_{AP4}[mutagaamiqan] _{AP5}[mu?adin ?ila ?as-sawaadi ?al-kaamili

darkened leading to the-darkness the-complete

"A fog-like ash-like ugly darkened (and) leading to the complete darkness jelly,
i.e. a jelly (which is) ashy foggy darkened (and) leading to a complete darkness".

71.c hulaaman _{AP4}[mutagaamiqan] _{AP5}[mu?adin ?ila ?as-sawaadi ?al-kaamili]

jelly darkened leading to the-darkness the-complete

"A darkened jelly (which is) leading to the complete darkness".

Although (71.b) contains five adjectives, the ordering of the relevant adjectives is the same, i.e. it is not relaxed. This shows that Ney's proposal that the ordering of adjectives is relaxed when the sequence contains more adjectives is not applicable to Arabic, since the above sequence is generally found in the data, and is not subject to variation. For example the AP4, in (71.b) or any other AP in (71.b), cannot follow AP5. In other words the order of the relevant adjectives is not affected by what Ney calls "the length constraint", according to which the order of the adjectives is relaxed when their number exceeds three.

7.4.2.3 The Order Of Simple And Participial Adjectives :

In our data there is a general tendency according to which Single unmodified adjectives when cooccurring in a sequence follow a general order as follows :

Head N + Denominal A + Simple A + Participial A

In the above section we discussed the first part in this sequence. In this section we will discuss the second part, viz the Simple and the Participial adjectives. The data show that the Participial adjectives generally follow the Simple adjective and occur at the end of a sequence. The statistical result found in the data is summarized in Table (8), below.

Simple And Participial Single unmodified Sequential Ordering				
Sequences	Functions		Total	Percentage
	Attributive	Predicative		
Head N + Simple A+ Part A	192	24	216	77
Head N + Part A + Simple A	54	11	65	23
Total			281	100

Table (8)

The above Table shows that when Simple and Participial single unmodified adjectives cooccur the former precede the latter in 77 percent of these occurrences, whereas in only 23 percent it follows. The Table also shows that this generalization is applied to both occurrences, i.e. attributive as well as predicative. In this connection the following examples are illustrative :

- 72.a fi wajhi-hi _{AP1}[?al-jamiili] _{AP2}[?al-muTam?ini]
in face-his the-beautiful the-satisfying
"In his beautiful satisfying face". (I279)
- 72.b bi jismi-hi _{AP1}[?al-qaSiiri] _{AP2}[?al-mudmaji]
with body-his the-short the-contracted
"With his contracted short body". (I143)
- 72.c wa maa?u-hu _{AP1}[?al-baaridu] _{AP2}[?al-muqaTTaru]
and water-its the-cold the-purified

- "And its purified cold water". (B61)
- 72.d min ?al-?angaami _{AP1}[?as-sariicati] _{AP2}[?al-mutacaaqibati]
 from the-tunes the-fast the-uninterrupted
 "From the uninterrupted fast tunes". (C171)
- 72.e bayna yaday ?al-?unuuθati _{AP1}[?at-taciisati] _{AP2}[?al-muJawwahati]
 between hands the-feminism the-unhappy the-deformed
 "Between the hand of the deformed unhappy feminism". (J37)
- 72.f wa ?al-xuruuju min ?al-waDci _{AP1}[?al-jadiidi] _{AP2}[?al-muzciji]
 and the-exiting from the-situation the-new the-annoying
 "And the release from the new annoying situation". (D69)
- 72.g wa Jacrin _{AP1}[?aswadin] _{AP2}[mafruuqin]
 and hair black separated
 "And separated black hair ... ". (D287)

In each of the AP1 in (72) there is a Simple adjective. They are of various semantic types, followed by the Participial adjectives in the AP2. In (72.a), for example, the adjective in AP1, *?al-jamiili* "the beautiful", belongs to the semantic type "Value". The other Simple adjectives in AP1, in (72.b-72.g), belong to the semantic types of "Dimension", "Physical Propensity", "Speed", "Human Propensity", "Age", and "Colour", respectively. Thus it can be generalized that when single unmodified Simple adjectives, of any semantic type, cooccur in a sequence with Participial ones, they generally precede.

However, the above generalization is not without exceptions. There are 65 examples in which a participial adjective precedes a Simple one, which shows that the relevant generalization applies to 77 percent of the single unmodified Simple and participial cooccurring adjectives. Examples representing the 23 percent are included in (73), below. A close look at these 65 examples shows that there are 24 examples in which a participial adjective of the type called "emotive" precedes a Simple adjective. Such "emotive" participles are described in the literature as having the characteristic features of Simple

adjectives (see Chapter V §5.1.3). For instance, the participial adjectives in AP1, in (73.c-73.d), unlike their corresponding ones in (73.a-73.b), are of the type "emotive" : *muzcijun* "annoying" and *?al-murawwici* "the surprising", respectively, which justifies their occurrence close to the modified head N preceding Simple adjectives in AP2.

- 73.a Sanduuqu-ha_{AP1}[*?al-muglaqu*] _{AP2}[*?al-kabiiru*] yata?arjaHu
 box-her the-closed the-big shaks
 "Her closed big box shaks". (F66)
- 73.b ?as-sahmu_{AP1}[*?al-munTaliq*] _{AP2}[*?al-?axDaru*]
 the-arrow the-released the-green
 "The released green arrow". (B75)
- 73.c wa Sawtun_{AP1}[*muzcijun*] _{AP2}[*caalin*]
 and voice annoying high
 "And a high annoying voice". (B126)
- 73.d ?amaama *?al-?iHsaasi* _{AP1}[*?al-murawwici*] _{AP2}[*?al-jadiidi*]
 in front of the-feeling the-surprising the-new
 "In front of the new surprising feeling". (B89)

Moreover, it is also found that 13 of these Participial adjectives preceding Simple adjectives have a corresponding intransitive rather than transitive verb. That is, those 13 Participial adjectives cannot take an accusative NP complement, and, therefore, they are less verb-like than Participial adjectives such as that in AP1 (73.a), *?al-muglaqu* "the closed". Examples of such intransitive Participial adjectives are included in (73.e-73.f) below.

- 73.e ?al-qaTaraatu_{AP1}[*?al-mutala?li?atu*] _{AP2}[*?albaaridatu*] taSilu ?ila fam-ii
 the-drops the-shining the-cold reaches to mouth-my
 "The cold shining drops reaches my mouth". (B91)

- 73.f fi wujuudi-hi _{AP1}[?aZ-Zaahiri] _{AP2}[?aT-Tawiili] _{AP3}[?al-mumtaddi]
 in existence-his appearing the-long the-stretched
 "In his appearing (emerging) long stretched existence". (B72)

In (73.e-73.f) there is a Participial adjective occurring in AP1 and preceding the Simple adjectives in AP2. These Participial adjectives have corresponding intransitive verbs : *tala?la?a* "shines" and *Zahara* "appears", respectively. This clearly shows that not all the exceptional examples are high on the scale of verb-like because of the following reasons :

1. Some of the Participial adjectives preceding the Simple adjectives belong to the emotive type (24 examples)
2. Some of the Participial adjectives preceding the Simple adjectives have a corresponding intransitive rather than transitive verb (13 examples).

Another supporting evidence from a different sequence is when two Participial adjectives cooccur in the same NP modifying a preceding head N we find the same two types predominantly preceding other Participial adjectives. That is, when the sequence is :

1 2
 Head N + Participial A + Participial A

If one of the above two Participial adjectives is emotive or derived from a corresponding intransitive verb, it will precede the other Participial adjective, i.e. occurs in the position under (1). The data show that this is very frequent, as exemplified in (74).

- 74.a bi lawni ?al-xafabi _{AP1}[?al-baahiti] _{AP2}[?al-maSquuli]
 with colour the-wood the-fading the-polished
 "With the fading polished wood colour". (I243)

- 74.b ?ayna Darbata-hu _{AP1}[?al-mufaaji?atu] _{AP2}[?al-Saaciqatu]
 where hit-his the-surprising the-striking
 "Where is his suprising (and) striking hit ?". (H133)

In (74) all the adjectives occurring in AP1 and AP2 are single unmodified Participial adjectives. However, in (74.a) the Participial adjective *?al-baahit* "the fading" is derived

from an intransitive corresponding verb, therefore, it precedes the Participial adjective in AP2, *?al-maṣquuli* "the polished", which is derived from a transitive corresponding verb. Although both Participial adjectives in (74.b) are derived from corresponding transitive verbs, that in AP1 precedes since it is emotive. This shows when Participial single unmodified adjectives cooccur those derived from intransitive corresponding verbs precede those derived from transitive corresponding ones. It also shows that even if both Participial adjectives are derived from transitive corresponding verbs, the emotive ones precede the nonemotive, as in (74.b).

(75.a), below, shows that Participial adjectives obey the heaviness principle since the participial comp-A, in AP2, *?al-maxluuqati* "the created", is heavier, it occurs further away from the modified head N *?al-quwwati* "the power", towards the end of the sequence. This provides further justification for the recognition of this principle, i.e. the order of the participial adjectives when cooccur with other participial ones depends on whether the participle takes a complement -on the degree it has retained its verbal nature (cf. Dezso 1982 : 99).

In other words, although both of the adjectives occurring in the sequence in (75.a) are Participial, the comp-A Participial, retains its verbal nature by taking a complement, and, therefore, follows the one without a complement. Thus on the same scale of verb-like, a Participial adjective that takes a complement is more verb-like than the one that does not. This verb-like criterion, does not seem to contradict with the heaviness principle. On the contrary it correlates neatly with it. (75.b) shows two cooccurring single unmodified Participial adjectives.

- 75.a wa bi sababin min ?al-quwwati _{AP1}[?al-mutaḡassidati] _{AP2}[?al-maxluuqati
 and with reason from the-power the-embodied the-created

 min cadamin]
 from nothing
 "And with a reason from the embodied power (which is) created from
 nothing".

(D265)

- 75.b haaðihi ?al-?arDu _{AP1}[?al-mutagayyiratu] _{AP1}[?al-mutaHarrikatu]
 this the-ground the-changing the-moving
 "This changing (and) moving ground". (C165)

While the above examples in (75) show the correlation between the heaviness principle and the verb-like criterion, they do not show which one is stronger since the sequences involve the same type of adjectives, viz. Participial, which would occupy the same position on the scale of verb-like. We will argue that the heaviness principle is stronger than the verb-like feature. The test which can explicitly demonstrate this is when a single unmodified Participial adjective occurs in a sequence with a comp-A Simple adjective. While Participial adjectives are more verb-like, since they take more complements in our data and since they, particularly active participles, can take an accusative NP complement, Simple adjectives are less verb-like, take less number of complements in our data, and cannot take an accusative NP complement. If the verb-like feature is stronger than the heaviness principle we would expect that it would dictate its power over the ordering of the adjective, and consequently we would find that the comp-A Simple adjective preceding the single unmodified Participial adjective, which, because it is more verb-like, occurs at the end of the sequence. On the other hand, if the heaviness principle is stronger we would expect the opposite sequence, i.e. the single unmodified Participial adjective would precede the comp-A Simple adjective. While there is no example in the whole data supporting the first hypothesis, the data show that the second hypothesis is more accurate, and provide us with very few examples, as in (76), which shows that the sequence is :

Head N + Participial A + Simple comp-A

76. wiHdatan _{AP2}[mutamaasikatan] _{AP2}[xaliiqatan bi muwaajahati ?af-jiddati]
 unit connected appropriate for facing the-difficulties
 "A connected unit appropriate for facing the difficulties". (I180)

(76) shows that AP1, which is a Participial single unmodified adjective, precedes AP2, which is introduced by a Simple comp-A. This means that when two adjectives, one is a

comp-A and the other is a single unmodified adjective, occur in the same sequence, whether the single unmodified adjective is more verb-like or not does not matter, because the verb-like criterion does not seem to affect the above sequencing. However, whether the adjective is comp-A or not affects the above sequence since the comp-A adjective follows the more verb-like adjective. In other words what seems to be strongly related to the heaviness principle is not whether the adjective is a verb-like, but rather whether the adjective is a comp-A⁴⁸. This seems to result from the fact that the heaviness principle is more stable, i.e. all heavy adjectives, whether a comp-A or a construct-A, are always more than one word. On the other hand, a Participial adjective, which is high on the scale of verb-like, does not always take a complement. Thus, it can be stated that the heaviness principle is stronger than the verb-like criterion. But before we close this section it must be noted that we are not denying that the semantic of a verbal predicate in a participial use and the type and complement (if any) of the participle all contribute to defining the nature and position of the participle. What we are suggesting is that the two principles are crucial, however when they exist together in one sequence, one can override the other because it is stronger.

Before we close this section it is important to note that there are two more structures which provide further evidence for our heaviness hierarchy : relative clauses (as in 77.a) and comparative structures (as in 77.b).

77.a haðihi ?an-naZratu ₁[?al-maHduudatu] ₂[?aθ-θaabitatu] ₃[?allati tanfaðu
this the-look the-limited the-fixed which penetrates

fi ?acmaaqi musaacidi-hi wa man Hawla-hu min ?ar-rijaal-i]
in depth supporters-his and who around-him of the-men

"This limited fixed look which penetrates in the hearts of his supporter and those
men who are around him". (B56)

77.b sirrun ₁[kabiirun] ₂[?akbaru min ?an ?aHmila-hu waHdii]
secret big bigger than to carry-it alone

"A big secret (which is) bigger than carrying it alone". (I351)

The following can be stated with respect to (77) :

1. The bracketed constituents in (1) and (2) in (77.a) and the bracketed constituent in (1) in (77.b) are single unmodified adjectives followed by heavy modifiers.
2. The bracketed modifiers (3) in (77.a) and in (2) in (77.b) are heavier since they contain more words and involve more branching nodes.
3. The two heavy modifiers are expandable. The relative clause in (77.a) contains another relative clause namely *man Hawla-hu min ?ar-rijaal-i* "those men who are around him", and the comparative includes the infinitive *?an ?aHmilahu waHdii* "to carry it alone".
4. If the single unmodified adjectives follow these heavy constructions the result is ungrammatical.

(77) provides further evidence for our heaviness hierarchy since the heavy constructions must appear at the end following the lighter ones⁴⁹.

7.4.2.4 The Order of Simple + Simple Adjectives :

In this section we will discuss the order of single unmodified Simple adjectives when occurring with other Simple adjectives modifying a preceding head N :

Head N + Simple A + Simple A.

We will divide Simple adjectives into four semantic types : Size, Colour, Age and Evaluation, and note that the latter type generally appear at the end following the other types. It will be argued that this is not in conflict with the subjective-objective principle found in the literature of English adjective order. The Arabic adjective order, it will be shown, is the mirror image of the corresponding English.

The data show that there are some weak tendencies which can be stated with respect to the various semantic types of Simple adjectives. Such weak tendencies show that the boundaries between various members which belong to the same type are not rigid as

opposed to the strong boundaries found between the three types of adjectives, denominal, Simple and Participial. Although the generalizations which we stated earlier with respect to the order of the various five adjective types (denominal, Simple, Participial, construct-A, and comp-A) correlate with high frequencies, the generalizations which will be stated in this section are rather tendencies having lower frequencies. Moreover, while the order of Simple + Simple adjectives is reversible, in the sense of Bache (1978), the order of various types of adjectives, particularly comp-As and construct-As is not reversible since the change of the corresponding order results in ungrammatical and/or an ambiguous structure. This difference between the adjective order discussed earlier and the one we will discuss in this section is probably due to the following :

1. The members in the Simple adjective constitute the same type irrespective of their various semantic types, i.e. Colour, Size, Evaluation, etc. all belong to the Simple adjective type.
2. These various semantic subclasses are not important with respect to the noun-like vs verb-like continuum, mainly because the two extreme members are excluded, i.e. denominal adjectives, which are the most noun-like, and Participial adjectives which are the most verb-like. That is, the order of single unmodified Simple A + Simple A does not involve what can be more noun-like, because the denominal adjectives are not included, nor does it involve what can be more verb-like because the Participial adjectives are not included.
3. The various semantic subclasses are not important for the heaviness hierarchy since the order under discussion in this section involves only single unmodified adjectives.

Therefore, our weak tendencies, which will be discussed in this section should not reduce the importance of the generalizations we already postulated. On the contrary, these tendencies show that because they are not discussed with respect to the postulated generalizations so far, they are weak. In other words, this should not be surprising because this section treats various members within the same type of adjective, viz. Simple. Our data collected in a questionnaire at a very early stage of this study point to the same conclusion.

We designed a questionnaire, which included various semantic types of Simple adjectives, and which was answered by 26 students from the university of Umm Al-Qura, Makkah. The result shows that the generalizations drawn from that data are weak, and have low frequency.

Our text-based data show that there are 381 occurrences (see Table 1, above) of single unmodified Simple+Simple adjectives which we divided into four semantic types : Size, Colour, Age and Evaluation. 265 occurrences are excluded because they involve a sequence of the same semantic type : Size+Size=17, Colour+Colour=13, Age+Age=2, and Evaluation+Evaluation=233. From the remaining 116 occurrences, summarized in Table (9), below, the following preferences can be stated :

1. Size+Evaluation (68 %) is preferable to Evaluation+Size (32 %)
2. Colour+Evaluation (74 %) is preferable to Evaluation+Colour (26 %)
3. Age+Evaluation (89 %) is preferable to Evaluation+Age (11%).

Occurrences of Various Semantic Types of Simple Adjectives

Adjective Sequence	No of Occurrences	Percentage
Head N+Size+Evaluation	23	68 %
Head N+Evaluation+Size	11	32 %
Head N+Colour+Evaluation	39	74 %
Head N+Evaluation+Colour	14	26 %
Head N+Age+Evaluation	8	89 %
Head N+Evaluation+Age	1	11 %

Table (9)

Table (9) shows that Evaluation adjectives occur further away from the modified head noun following Size, Colour or Age adjectives. However, this should not be considered as an absolute rule since there are other examples in which we find Evaluation adjectives preceding these three semantic types. In this connection consider the following examples.

78.a fi ?al-cuyuni ?aS-Sagiirati ?ar-raqiiqati
 in the-eyes the-small the-soft
 "In the soft small eyes". (H122)

78.b wa fi ?ad-dahliizi ?aT-Tawiili ?ar-raTbi
 and in the-lobby the-long the-moist
 "In the moist long lobby". (H135)

The examples in (78) show that Evaluation adjectives follow Size adjectives. This is a preferable order in 74 percent of the occurrences. (78.b) shows the same thing with other adjectives of the same semantic type. However, the reversed order is also found in the data but with less frequency. Thus it can be stated that when Size and Evaluation adjectives cooccur in the same NP modifying a preceding head N, Evaluation adjectives generally occur at the end of the sequence. Now consider the following examples :

79.a mafrqin ?abyaDin jamiilin
 division white beautiful
 "A beautiful white division". (J111)

79.b aaatu ?arDiiyyatin bayDaa? Saafiyatin
 of ground white clear
 "Of clear white ground". (G116)

All the underlined adjectives in (79) are Simple adjectives. However, in each of the above examples there is an Evaluation adjective following a Colour adjective, and occurring at the end of the sequence. For example, in (79.a), the Evaluation adjective *jamiilin* "beautiful" follows the Colour adjective *?abayDin* "white". This shows that Evaluation adjectives are preferable at the end of the sequence when cooccurring with Colour adjectives. Thus it can be generalized that Evaluation adjectives generally follow Colour adjectives with a 74 percent preference. Now consider the following examples.

- (ii) Head N + objective adjectives + subjective adjectives Arabic

Notice that in (i) the objective adjectives occur at the beginning of the sequence whereas in (ii) they occur at the end of the sequence. But this does not mean that Arabic adjective order contradicts the subjective-objective principle because of the difference between English and Arabic word order. That is, what is relevant is the order of adjectives with respect to the modified head noun rather than with respect to the beginning or end of a sequence. (i-ii) clearly show that Arabic adjective order is the mirror image of the corresponding English one. This is because English is a AN language as opposed to Arabic which is a NA language. Such difference between the two languages is reflected in their corresponding adjective order. Therefore, the Arabic adjective order is not in conflict with the subjective-objective gradience but rather provides a supporting evidence from another different language, such as Arabic, as to its accuracy.

7.5 Concluding Remarks :

In this Chapter the various types of Arabic adjectives treated in earlier Chapters are brought together in a unified treatment of their order when they occur in the same NP or predicatively and modify the same head noun. The three types of Arabic adjectives : denominal, Simple and Participial with two more subclasses viz comp-As and construct-As obey two rules, which divide Arabic adjectives into heavy : comp-A and construct-A, and single unmodified adjectives : denominal, Simple and Participial.

The first rule predicts that when a heavy adjective cooccurs with a single unmodified adjective the former will appear further away from the modified head noun towards the end of the sequence. It also predicts that comp-A, which allows expansion, is heavier than construct-A, which does not allow expansion. The heaviness principle is stated as follows :

Comp-A > Construct-A > Single unmodified A

The second rule accounts for the cooccurring adjectives of the lowest level in the above hierarchy. It predicts that the noun-like adjectives (cf. denominal) occur close to the modified head noun preceding other adjectives. It also predicts that the verb-like adjectives occur further away from the modified head noun towards the end of the sequence. Moreover, since Participial adjectives are more verb-like than Simple adjectives they occur at the very end of the sequence following both denominal and Simple adjectives. Since Simple adjectives are less verb-like than Participial adjectives, but more verb-like than denominal adjectives, they seem to occupy the middle position between the two extremes : denominal and Participial adjectives. Therefore, a continuum from noun-like to verb-like is suggested which accounts for the Arabic cooccurring single unmodified adjectives :

Head N + Denominal A + Simple A + Participial A.

Although the two rules are related to each other since the verb-like feature seems to relate to the comp-A type of adjectives, they were not collapsed into one since the first rule cannot predict the order of the various members in its lowest level. Finally, the various semantic types of Simple single unmodified adjectives are discussed and found to be the mirror image of their corresponding English ones with respect to the subjective-objective criterion.

- 1 This does not mean that denominal adjectives never occur predicatively. In fact, the data show that they do, though very rarely. However, we found no examples of a predicative denominal adjective occurring in a sequence, i.e. either preceding or following another adjective.
- 2 Notice that generalization (i) does not predict whether or not a Simple adjective precedes a Participial adjective.
- 3 The exceptional 22 percent in which we find Participial adjectives preceding Simple adjectives is further investigated and found that a considerable number of these Participial adjectives belong to what is called "emotive" adjectives which correspond to English examples such as *interesting*, *exciting*, etc. It also shows that a considerable number of these Participial adjectives are derived from corresponding intransitive verbs, rather than transitive. For more on this see §7.4.2.3.
- 4 The heaviness constraint may not be directly related to the English adjectives but it is related to the heavy NP shift (see the discussion of the Heaviness Principle in §7.4.1.1).
- 5 It is important to note that such a generalization is not found in the literature of adjective ordering which is dominated by studies in English and other Indo-European languages. The absence of such a generalization relates directly to the fact that in Arabic, unlike in English, a sequence of two or more attributive comp-As is possible. For more on this issue see §7.3.1.
- 6 See the "Types of Adjective Complements" in §7.3.2.
- 7 The same observation is made with respect to the ordering of central adjectives in English by some linguists, particularly Quirk et al (1985) (see the discussion on Quirk et al's in §7.2.2).
- 8 The following features are discussed in Chapter VI when we treated denominal adjectives in Arabic. We will relate them to the noun-likeness principle, which is discussed in this Chapter, and note that when applying the "noun-likeness" principle to the Arabic data the features below are relevant :
 1. whether the form is derived from corresponding noun by taking the denominal suffix *-iyy*.
 2. whether the form is ungradable.
 3. whether the form occurs mainly attributively rather than predicatively.
 4. whether the form nominalize.
 5. whether the form takes a complement.

Most denominal adjectives and prototypical nouns in Arabic are generally characterized by the features in (2-5). The features in 1-4 are discussed in detail in Chapter VI in §6.5). Denominal adjectives, unlike Simple and participial adjectives, are derived from a noun base by the suffix *-iyy*. They generally do not nominalize since they are "noun-like" and they are not generally gradable. We also note that they generally occur attributively rather than predicatively. Finally, they generally do not take complements. Because of all these features, Arabic denominal adjectives are thought to be "noun-like", and therefore, they generally occur close to the modified head noun in a sequence of adjectives. For more see §7.5.4.

- 9 Dezso (1982) collected 15000 noun phrases from various written sources in

Hungarian. Adjectives occurring in sequences are only 1000 examples. An exception is Ney who presented very long Tables of statistical results. However, his frequency of occurrences are unsupported by any theoretical account (see Neys in 7.2.7)

- 10 It must be noted that we found contradictions in Quirk et al (1985 : 1339). They claim that Size adjectives such as *tall* precede other derived adjectives such *attractive*. They also claim that nonderived adjectives precede derived adjectives. The following are the exact examples given by Quirk et al (1985 : 1339) :

- a. a tall attractive woman
- b. *an attractive tall woman
- c. a beautiful warm weather
- d. *a warm beautiful weather
- e. beautiful long hair ~ hair that is long and beautiful

They note that (a) is preferred to (b) on the basis that *tall* is nonderived while *attractive* is derived. However, Quirk et al (1985 : 1339) also observe that emotive adjectives precede other adjectives as in (c), which they prefer to (d). Notice that both *tall* and *warm* are nonderived, and both *attractive* and *beautiful* are derived and emotive. While the nonderived adjective in (a) precedes the derived one, that in (c) follows. This clearly shows a contradiction in Quirk et al's.

They made it worse when later on page 1341, in a footnote, note that the order of English attributive adjectives is the inverse of the predicative order. To prove the point they give example (e). Notice in (e) the Size adjective *long* follows the emotive and derived adjective *beautiful*, whereas the Size adjective *tall*, in (a) precedes the emotive and derived adjective *attractive*. This is another contradiction found in Quirk et al's.

- 11 It is important to observe that linguists as well as psychologists have come to little agreement on whether adjective order constraints are semantic or syntactic in origin. Such a decision has an important developmental implication. If it is syntactic, the acquisition of adjective ordering in the child's own speech would have to wait for the acquisition of the complex syntactic structures on which they depend. Grammatical structures are generally acquired in the order from the simpler to the complex, so according to Vendler (1968) analysis, ordering preferences for the simpler adjectives occurring closer to the noun should be acquired before those for the more complex adjectives occurring farther away.

If the adjective order constraints are semantic, and a formula exists which assigns ordinal positions to members of semantic classes, then the acquisition of ordering constraints requires both the acquisition of the formula and knowledge of the semantic class membership of the various adjectives. Thus, for example, to describe an *extremely big black house* with the correct order of adjectives, the child must know both that *big* is an adjective of 'size' and thus precedes the colour adjective *black* and follows the intensifier *extremely* and that the intensifier precedes its head. This does not concern us.

- 12 Bache's system depends heavily on the comma, which is relevant to the English written structure rather than the Arabic one.
- 13 Although Sussex (1974a, 1974b) discussed broken and unbroken sequences Bache never quoted him nor does he include Sussex's in his bibliography. The unbroken sequence is also called 'stacks' (cf. Sussex 1974 and Gil 1983).

- 14 To quote,

"Mod. I-adjectives constitute a *function class* (emphasis not mine) of adjectives rather than a set of rigid order classes" (cf.

1978 : 33).

"Mod. II is most appropriately treated in functional terms since some of these central adjectives frequently appear in Mod. I-position or in Mod. III-position". (cf. 1978 : 34)

"But since adjectives from these order classes may occur outside Mod. III and since Mod. I and Mod. II may occur in Mod. III-position, Mod. III is best regarded as a function class of adjectives." (cf. 1978 : 37).

- 15 Bache states that "the lack of commas and/or conjunctions is symptomatic of structure in constructions where broken and unbroken sequences co-occur" (cf. Bache 1978 : 26).
- 16 Bache's remarks that "a change in order would cause the non-inherent Mod. III-adjective to change Mod.-zone" (cf. Bache 1978 : 64).
- 17 Some native speakers may consider *wild bird* as a compound. However, this example is cited by Bache (1978 : 63), taken from page 86 of Nevil Shute's *ON THE BEACH*.
- 18 For a discussion on the distinction between the two see Chapter VI §6.1.
- 19 It is observed by other linguists such as Martin (1969) and Bever (1970), that the noun-like adjectives occur close to the head noun. This point will be discussed in §7.4.2.1. However, a discussion with respect to the verb-like adjectives and their sequential relation to the noun-like is not found in the literature.
- 20 In a similar way Hill (1958 : 176) divides the modifiers into various zones and suggests a criterion for identifying ordering classes based on the substitutability of the adjectives within the phrase, and the order and juncture patterns between them when they co-occur. Hill establishes six major classes of modifiers which are supposed to take care of the cooccurring elements, e. g.,

VI V IV III II I
all the ten fine old stone houses.

To quote, "Two words belong to the same order class if one can substitute for the other without affecting the framework of the phrase. Two words belong to different order classes either if they occur in fixed sequence, as do *the* and *ten*, or if their sequence can be broken only by placing a terminal juncture between them".

It must be noted that some native speakers of English may not agree with Hill's classification. That is, Hill's inversion of the normal order, for example- V VI II III I *the ten old fine stone houses* for V VI III II I *the ten fine old stone houses* -requires a terminal juncture between II and III. Some native speakers may reject Hill's on the basis that there is no difference in suprasegmental structure between the two utterances. Consequently, the distinction between Hill's class III and class II collapses.

- 21 The difference between Quirk et al's and Bache's will become clearer when we discuss their "inherent" vs "noninherent" adjectives (see §7.2.4).
- 22 In §7.4.2.4 we will argue that the order of Simple unmodified adjectives in Arabic when cooccurring with other Simple unmodified adjectives is the mirror image of English. This is because in Arabic the more opinion-like adjectives (subjective) appear at the end of a sequence.
- 23 For us the term "emotive" is reserved for participial adjectives such as *baffled*, *amazed*,

astonished, amazing, astonishing etc., excluding adjectives such as *wonderful* (cf. §5.1.3).

- 24 Strang (1962 : 121) distinguishes between what she calls "inherently unplaced" and "inherently placed" adjectives where the former, unlike the latter, is movable and does not belong to a "positional class", which are exemplified by her : *the bean has a pale green dicotyledonous seed vs a dicotyledonous, pale green seed*.
- 25 Bache defines "noninherent" adjectives as those "adjectives which typically appear outside Mod.II and meet the criteria of either Mod.I or Mod.III, but which may function occasionally in Mod II" (Bache 1978 : 69).
- 26 Dixon (1982 : 26) observes that Haiman reports that the ordering of adjectives in Hungarian is similar to that in English since in Hungarian VALUE adjectives precede DIMENSION and AGE; DIMENSION usually precedes PHYSICAL PROPERTY; DIMENSION and PHYSICAL PROPERTY precede COLOUR ; and so on. Dixon also notices that, according to Krishnamurti, in Telugu VALUE adjectives come first, followed by AGE (the main difference from English ordering), then DIMENSION, then PHYSICAL PROPERTY and COLOUR.
 For NA languages Dixon (1982 : 26) observes that K. A. McElhanon (1972 : 14, 81) gives the order of adjectives in Selept, from the Morobe district of New Guineas as : Sex, COLOUR, AGE, HUMAN PROPERTY/VALUE, PHYSICAL PROPERTY, DIMENSION and NUMBER. This is almost, as noted by Dixon, the mirror image of the pre-head adjective order in English and other languages, the only important difference being the placement of VALUE.
- 27 These types, found in Dixon (1982), are restricted to descriptive adjectives as stated by Dixon himself (1982 : 3) : "We restrict ourselves to 'descriptive adjectives'". Dixon also excludes the items in (A) and (C) from his questionnaire which he applied in 1970. To quote,

"Here we are only concerned with the items under B (those which can be preceded by *rather, very* or *quite*), which always follow items A and precede C" (Dixon 1982 : 24).
- 28 This seems to be the same observation made by Hill (1958 : 176) as we noted in footnote 20 above.
- 29 It is interesting to note that Chomsky maintains that the adjective order is "inexpressible in any natural way in a transformational grammar" (1973 : 275). On the other hand, it is strange to find very recent analyses advocating for a transformational account for the adjective order (cf. R. Posner 1986).
- 30 There are 192 students from 3 groups (graduate 27, freshmen 123, foreign 33). The first questionnaire includes 12 item pairs construed from 6 phrase frames, with every two item pairs differing only in one variable adjective :
 - 1 A ... the old little man ...
 - B ... the little old man ...
 which constituted to
 - 2 A ... the venerable little man ...
 - B ... the little venerable man ...

The second questionnaire uses different adjectives which are combined with respect to the relative frequency of their occurrence in English. In each phrase frame there is a high frequency variable adjective which is compared to a low-frequency one as

follows.

- 3 A ... the happy (98) celebrating (5) citizen ...
 B ... the celebrating (5) happy (98) citizen ...
 which are construed to
 4 A ... the happy (98) cavorting (2) citizen ...
 B ... the cavorting (2) happy (98) citizen ...

The numbers in parentheses are not included in Ney's. They indicate the frequency of the preceding modifier, as shown in Kucera and Francis 1967, on which Ney depends, in order to investigate the relationships between the relative frequency of occurrence and the selection of order alternatives.

The third questionnaire consists of various adjectives with varying positions of the first four adjectives :

- 5 A ... a blind young happy black Belgian sheep dog ...
 B ... a blind happy young black Belgian sheep dog ...

- 31 Ney is following Labov's notion of "variable rule".
- 32 For more on the Simple + Simple adjective order see §7.4.2.4 where we note that there are some weak tendencies which can account for such ordering.
- 33 The difference among the native speakers regarding the order of prenominal adjectives in English is not new. Even English grammarians do not seem to agree with one another on this issue. For example, Hornby (1961) does not agree with Strang (1962) regarding the same structure. While Strang writes *the queen's little dark brown old dancing shoes*, Hornby writes *the queen's old little dark brown dancing shoes*. Moreover, while Hill (1958 : 176) places the adjectives *old* or *new* before colour adjectives : *old grey horse*, Strang (1962 : 121) orders colour adjectives before age : *gray old horse*. This clearly shows that Ney is probably not wrong in claiming that the rule ordering of English cooccurring adjectives is subject to violation.
- 34 Although this, if true, means that the order of adjectives in Arabic is syntactic, we do not wish to offer a transformational explanation which seems to be inadequate.
- 35 This fact will be extended in order to account for the adjective ordering. It will be discussed that since the data show that denominal adjectives generally occur next to the modified head N preceding the other types of adjectives, and since there is a correlation between taking a complement and the position of the adjective with respect to the head N, a correlation between the types of adjectives without complements and their position with respect to the modified head N is borne, i.e. the sequence of cooccurring adjectives with complements or without complements is generally : N + Denominal A + Simple + Participial A (see §7.4.2).
- 36 Owens (1984) states this in describing the Arabic grammatical theory rather than reflecting what he exactly thinks. Therefore, the critique should not be directed to him.
- 37 The term 'collocation' is introduced by Firth, practically for the habitual accompaniment of one word by another : see J. R. Firth (1951) "Modes of Meaning". *Essays and Studies*, 4, 118-149.
- 38 The adjective *xalliqun* is translated as "appropriate" which in English does not take an obligatory complement. However, in Arabic the underlined constituent following *xalliqun* "suitable", is obligatory since its omission results in unacceptability.

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- 39 The concept of left-branching and right-branching structures is related to our heaviness principle. The difference between the two is illustrated in the two types of modification : premodification (left-branching) occurring before its head, and postmodification (right-branching) occurring after it. It is assumed that these expansions will vary greatly in conditioning force. In particular, left-branching and right-branching structures can be expected to impose very different constraint on the ordering of modifiers. Left-branching expansion are usually made up of short items such as determiners whereas the latter tend to be longer and structurally more complex. For these reasons they occur further away from the head following other modifiers.
- 40 These four examples are due to Bever (1970 : 321-322).
- 41 The medial position as shown above is probably unacceptable on the basis that no NP can occur in the position preceding *that*.
- 42 The attributive N + construct-A + single unmodified A sequence is not preferable because it does not occur in the data. However, the corresponding predicative sequence is possible but very rare.
- 43 In the psycholinguistic literature, the unresolved issue related to the ordering of adjectives is whether it is determined by psychological processes in the production (cf. Martin 1969a and 1969b) or in the comprehension (cf. Bever 1970, 1974, Danks and Glucksberg 1971, Danks and Schwenk 1974)). This issue does not concern us.
- 44 Although the term nounlikeness is peculiar we used it only as the head title of this section since it occurs in the adjective order accounts such as Martin (1968), Martin and Ferb (1973), Bever (1970). However, in our discussion we will use noun-likeness to refer to the same feature.
- 45 Also Givon (1990 : 470) notes that an adjective occurring close to the noun is more likely to be more central to the meaning of the noun, more inherent quality durable of the noun, more generic rather than specific information.
- 46 The term *cabqar* refers to a small village, in Saudi Arabia, which does not exist now, famous for the smartness of its people.
- 47 This continuum could be considered as an extension of Givon (1979 : 324-29 and 1984 :) since in both the verb-like and the noun-like elements are opposed to each other and between them adjectives are placed. Givon distinguishes between the two prototypical classes V and N with respect to the feature of time-stability. The most time-stable percepts (perceptual judgment) which change slowly over time and which are likely to be identical to themselves in terms of properties, are lexicalized as nouns. On the other hand, the least time-stable percepts such as events and action involve rapid change in the universe are lexicalised as verbs. Between the two extremes Givon places adjectives since they depict states of varying degree of intermediate duration. Givon provides evidence for his continuum based on the two Spanish copulas *estar*, which is rendered "be in place" or "be temporarily" and cannot be used with nouns, but only with temporary-location and temporary adjectives, and *ser* which is used with nouns as well as with permanent-quality adjectives. Some of the examples he provides are :
- 1.a Esta en la casa (LOCATION, TEMPORARY)
"He is in the house".
- 1.b Esta enfermo (TEMPORARY ADJECTIVE)
"He is sick (right now)"

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- | | |
|---------------------|---------------------|
| 1.c *Esta un hombre | (NOUN IDENTITY) |
| "He is handsome". | |
| 2.a Es de Espana | (PEMANENT LOCATION) |
| "He is from Spain". | |
| 2.b*Esta de Espana | |

- 48 This provides another evidence showing that although the verb-likeness criterion is related to the heaviness principle, it was not included with it, but rather placed in a continuum with the noun-likeness principle, with which it sharply contrasts.
- 49 Whether these two constructions can be included in our hierarchy is not impossible, however, since these constructions are very rare and since we are interested in adjectives rather than in modification in general, we will keep them separate from our hierarchy.

8. Conclusion :

8.1 Arabic adjectives constitute an independent word class separate from nouns. They can occur attributively in an endocentric construction modifying a preceding head N with which they agree in case, gender, number and definiteness, or predicatively. There are three main types : Simple, Participial and denominal. These are distinguished from each other syntactically, semantically and morphologically. These types do not enjoy an equal status since some members are better exemplars of the adjective category (cf. Simple A) while others may have various subclasses according to their differences from the prototype class.

8.2 Although Arabic adjectives share with nouns some features they differ from nouns with respect to much more features : their gender is predictable, they take both Broken and Sound plural, they take the comparative and superlative, they do not take possessive pronouns, they do not have a complete definiteness system, they can follow the exclamatory *ma* "how", the negative *gayr*, cannot occur after the *la* of "existence", cannot occur in the "comprehensive permutation" construction, can modify some maximum-generality words, can be modified by intensifiers such as *jiddan* "very", are highly restricted in subject position, can have certain dependents requiring a preceding head A, can take the definite article as first members in the construct phrase, are not paraphrasable by the preposition *li* "for" in the construct phrase. Semantically they are predicational expressions of first-order states. Any grammar that ignores the differences between nouns and adjectives must explain these facts. Therefore, the analysis of the traditional Arab grammarians and some modern linguists, which ignores these differences and assigns Arabic adjectives to the class of nouns is inadequate. Consequently Arabic adjectives constitute a word class separate from nouns.

8.3 Arabic adjectives have certain patterns which are predictable for Participial and denominal adjectives as opposed to Simple adjectives which do not employ affixes, and therefore, unpredictable. However, although denominal adjectives take a single suffix *-iyy*, there are some taking the same suffix and behaving differently viz Predicating. With respect to Participial adjectives they share with Simple adjectives the pattern /FaaCiL/. That is,

although morphologically denominal and Participial adjectives take certain affixes, it is not predictable whether a form would behave like a true participial adjective or a Simple adjective. Therefore, although the morphological criterion is useful, it is not sufficient to provide clear distinctions between the various types of adjectives.

8.4 The status of Arabic participles whether nominal or verbal is inadequate since it shows that it is better analyzed as one type of adjectives since this is the predominant syntactic function. Although Participial adjectives are considered as adjectives they are peripheral members since they differ from central adjectives with respect to some criterial features showing that they are more verb-like.

8.5 Although Arabic denominal adjectives take one suffix *-iyy* the range of meanings cannot be constrained since the contribution of the head N is crucial. Denominal adjectives have a prototypical meaning, "related to the head N somehow", which accommodates the marginally deviant concepts by bringing them into existence as peripheral members of the relevant category, maintaining the overall structure of the category itself. Deriving a denominal adjective from a concrete base noun is unpredictable, however, derivation of denominal adjectives from a quadrilateral action noun base is predictable.

8.6 Arabic adjectives occurring in the same NP and modifying the same head N, or occurring predicatively and modifying the same head N obey two important rules which predict their order. Arabic adjectives are divided into heavy (cf. comp-A and construct-A) and nonheavy, i.e. single unmodified adjectives (cf. Simple, Participial and denominal). When the two heavy types cooccur in a sequence, or when a heavy A cooccurs with a nonheavy A, they obey the Heaviness Hierarchy which predicts that the position of the adjective depends on how heavy it is since the heavier the adjective the further away from the head N it occurs. That is, the Heaviness Hierarchy predicts that heavy adjectives appear at the end of a sequence. Since single unmodified adjectives are by definition nonheavy they appear close to the modified head N preceding any of the other two heavy types. Moreover, since comp-A allows expansion and the number of its branching nodes can be increased whereas construct-A form an inseparable unit disallowing expansion the former

is heavier. Therefore, when the two heavy types occur in the same NP modifying the same head N comp-A appears further away from the head N towards the end of the sequence. Therefore, the Heaviness Hierarchy is formulated as follows :

comp-A > construct-A > single unmodified A

But since the above hierarchy cannot predict the order of various types in its lowest level, i.e. when single unmodified Simple, Participial and denominal adjectives cooccur, a second rule is needed. This rule employs a continuum between the "noun-likeness" vs the "verb-likeness" criteria, which predicts that the more noun-like an adjective is the closer to the modified head N it appears, and the more verb-like an adjective is the further away from the modified head N it occurs. Between the two extremes, i.e. between the most noun-like adjectives (cf. denominal) and the most verb-like adjectives (cf. Participial) Simple (cf. central) adjectives appear since they are more verb-like than denominal but less verb-like than Participials. Thus the order of single unmodified adjectives is as follows :

Head N + denominal A + Simple A + Participial A.

8.7 It is important to note that all the above generalizations are made possible by using a computerized data-base which provided adequate results and better understanding of Arabic in general, and of Arabic adjectives, in particular.

APPENDICES

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|--------------|--------------|---------------|
| 1. &miim | 36. Daciif | 71. jaziil |
| 2. &aliil | 37. dafiin | 72. ka?iib |
| 3. ?aliif | 38. damiim | 73. kabiir |
| 4. ?amiin | 39. danii? | 74. kafiif |
| 5. ?aniiq | 40. daqiiq | 75. kafiil |
| 6. ?a?iib | 41. Dariir | 76. kaHiil |
| 7. ?aSiil | 42. faqiir | 77. kaliim |
| 8. ?asiir | 43. fariid | 78. kariih |
| 9. ?a&iim | 44. faSiiH | 79. kariim |
| 10. ?a&iir | 45. fasiiH | 80. ka&iif |
| 11. ?axiir | 46. faZiic | 81. ka&iir |
| 12. baciid | 47. gafiir | 82. la&iid |
| 13. badiic | 48. galiZ | 83. la?iim |
| 14. badiin | 49. gariib | 84. labiib |
| 15. bagiiD | 50. gaziir | 85. laciin |
| 16. bahiij | 51. Habiib | 86. madiid |
| 17. baliig | 52. Habiis | 87. majiid |
| 18. barii? | 53. Hadii& | 88. malii? |
| 19. basiiT | 54. Hakiim | 89. maliiH |
| 20. baTii? | 55. Haliim | 90. maniic |
| 21. cadiid | 56. Haliiq | 91. maqiit |
| 22. cajiib | 57. Hamiim | 92. mariiD |
| 23. caliil | 58. Haniif | 93. mariir |
| 24. caliim | 59. Haqiir | 94. matiin |
| 25. camiiq | 60. HariiS | 95. nabiil |
| 26. caniif | 61. haziil | 96. naDiir |
| 27. caqiim | 62. Haziin | 97. nafiis |
| 28. cariiD | 63. jadiid | 98. naHiif |
| 29. caSiib | 64. jadiir | 99. naHiil |
| 30. casiir | 65. jahiir | 100. na?iiT |
| 31. catiiq | 66. jaliil | 101. naZiif |
| 32. caZiim | 67. jamiil | 102. qabiiH |
| 33. caziiz | 68. jarii? | 103. qadiim |
| 34. Da?iil | 69. jariiH | 104. qadiir |
| 35. Da?iir | 70. jasiim | 105. qaliil |

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| 106. qamii? | 141. ɸamiin | 176. ɸakiy |
| 107. qariib | 142. ɸaqiil | 177. ?ariq |
| 108. qaSiir | 143. waDiic | 178. baɸic |
| 109. ra?iis | 144. wafiir | 179. caTin |
| 110. radii? | 145. wajiiah | 180. dabiq |
| 111. raDiic | 146. wajiiz | 181. fariH |
| 112. rafiic | 147. waɸiik | 182. gabiy |
| 113. rahiib | 148. wasiim | 183. ganiy |
| 114. raHiim | 149. waɸiir | 184. Haɸir |
| 115. rajiim | 150. xabiiɸ | 185. Harij |
| 116. rakiik | 151. xafiif | 186. jaliy |
| 117. raɸiiq | 152. xaliic | 187. jaɸic |
| 118. raɸiiq | 153. xaliiq | 188. labiq |
| 119. raSiin | 154. xaSiib | 189. lazij |
| 120. ratiib | 155. xasiis | 190. mariH |
| 121. raxiim | 156. xaTiir | 191. naDir |
| 122. raxiiS | 157. yasiir | 192. nadiy |
| 123. raziin | 158. yatiim | 193. naɸiy |
| 124. saciid | 159. zahiid | 194. naɸiT |
| 125. SaHiiH | 160. Zariif | 195. natin |
| 126. saHiiq | 161. ?abyaD | 196. qaiɸr |
| 127. saliim | 162. ?aSfar | 197. qaliq |
| 128. samiic | 163. ?aHmar | 198. qawiy |
| 129. samiik | 164. ?aswad | 199. Sadi? |
| 130. samiin | 165. ?azraq | 200. jahiy |
| 131. saɸiim | 166. ?axDar | 201. ɸajiy |
| 132. sariic | 167. ?acraj | 202. ɸaqiy |
| 133. Sariih | 168. ?ajaɸ | 203. ɸaris |
| 134. saxiif | 169. ?aSlac | 204. tacib |
| 135. jadiid | 170. ?aHmaq | 205. taɸiy |
| 136. jariid | 171. ?aczab | 206. Tariy |
| 137. jariif | 172. ?acwar | 207. ɸariy |
| 138. taciis | 173. ?abkam | 208. wacir |
| 139. Tariif | 174. ?acma | 209. wafiy |
| 140. Tawiil | 175. ?amrad | 210. wajil |

211. waqiH	246. θaml	281. Daruus
212. waric	247. xaSb	282. gaJuum
213. waJin	248. Hassaas	283. gayuur
214. xafiy	249. rannaan	284. Hanuun
215. xajil	250. rayyaan	285. jasuur
216. xarib	251. jayyaaJ	286. kasuul
217. xaJin	252. Tammaac	287. lacuub
218. xaTir	253. hayyaab	288. laduud
219. yaqiZ	254. barraaq	289. jakuur
220. Tayyib	255. jabbaar	290. jamuus
221. sayyi?	256. jawwaal	291. TamuuH
222. nayyir	257. Jaffaaf	292. Taruub
223. jayyid	258. fattaak	293. waduud
224. kayyis	259. faccaal	294. waquur
225. θayyib	260. fawwaaH	295. galTaan
226. ?ahl	261. qattaal	296. jabaan
227. caθb	262. qahhaar	297. nacsaa
228. DaHl	263. haddaam	298. sakraan
229. dasm	264. waDDaa?	299. sarHaan
230. Daxm	265. wahhaaj	300. yaqZaan
231. faxm	266. bassaam	301. Hasan
232. gaDD	267. jaθθaab	302. baTal
233. jamm	268. HaJJaaJ	303. xaTa?
234. Haqq	269. xaffaaq	304. murr
235. kahl	270. xallaaq	305. kuf?
236. maHD	271. razzaaq	306. Hulw
237. nahm	272. saffaaH	307. Jujaac
238. raHb	273. saffaak	308. cirr
239. rahn	274. fayyaaD	309. Dulf
240. raTb	275. ka66aab	310. jilf
241. raxw	276. nazzaac	311. Cimlaaq
242. Sacb	277. naSSaab	312. fiDfaaD
243. sahl	278. naffaaθ	313. cirbiid
244. Salb	279. θabuul	314. firriir
245. Jahm	280. baJuuj	315. quSwa
		316. Hublaa

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| 1. ʕaabil | 31. caakis |
| 2. ʕaahib | 32. caalim |
| 3. ʕaahiy | 33. caaliy |
| 4. baaʕis | 34. caamil |
| 5. baaciθ | 35. caamir |
| 6. baadiy | 36. caaqil |
| 7. baagiyy | 37. caaqir |
| 8. baahir | 38. caariD |
| 9. baahit | 39. caarif |
| 10. baahiZ | 40. caarim |
| 11. baakir | 41. caariy |
| 12. baakiyy | 42. caaʕiq |
| 13. baalig | 43. caaSif |
| 14. baaliy | 44. caaSiy |
| 15. baaqiyy | 45. caaθir |
| 16. baaric | 46. caaTil |
| 17. baarid | 47. caaTiy |
| 18. baariH | 48. daaʕib |
| 19. baariz | 49. Daaʕic |
| 20. baasil | 50. daaʕim |
| 21. baasim | 51. daaʕir |
| 22. baatir | 52. daabir |
| 23. caaʕim | 53. daacir |
| 24. caabir | 54. daafiʔ |
| 25. caabis | 55. daafiq |
| 26. caabiθ | 56. DaaHik |
| 27. caadil | 57. daahim |
| 28. caajil | 58. daahiy |
| 29. caajiz | 59. daakin |
| 30. caakif | 60. Daalil |

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| 61. daamic | 91. gaaʔib |
| 62. Daamir | 92. gaaʔim |
| 63. daamis | 93. gaaʔir |
| 64. daamiy | 94. gaabir |
| 65. daaniʔ | 95. gaadir |
| 66. Daarib | 96. gaafil |
| 67. daaxil | 97. gaaliy |
| 68. faaʔiq | 98. gaamiD |
| 69. faaʔir | 99. gaamid |
| 70. faaʔiz | 100. gaamiq |
| 71. faacil | 101. gaamir |
| 72. faaDiH | 102. gaariq |
| 73. faaDil | 103. haaʔiy |
| 74. faagir | 104. haaʔif |
| 75. faaHiS | 105. haaʔij |
| 76. faaHiS | 106. haaʔil |
| 77. faajir | 107. haaʔim |
| 78. faaniy | 108. Haaʔir |
| 79. faaqic | 109. Haaʔiz |
| 80. faaqid | 110. haabiT |
| 81. faaric | 111. haadiʔ |
| 82. faarig | 112. HaaDir |
| 83. faariH | 113. haadir |
| 84. faariq | 114. Haadiθ |
| 85. faaʔil | 115. Haafil |
| 86. faasid | 116. Haafir |
| 87. faaSil | 117. Haafiy |
| 88. faatin | 118. Haajiz |
| 89. faatir | 119. Haakim |
| 90. faaxir | 120. Haalim |

121. Haaliy	155. kaadiH
122. HaamiD	156. kaafiy
123. haamid	157. kaaHil
124. Haamil	158. kaaliH
125. haamis	159. kaamil
126. Haamiy	160. kaamin
127. haani?	161. kaaJif
128. Haaniq	162. kaasir
129. Haaqid	163. kaatib
130. haarib	164. laaʔic
131. Haarin	165. laaʔiq
132. Haasim	166. laahiy
133. haazi?	167. laamic
134. Haazim	168. maʔij
135. jaaʔib	169. maaʔic
136. jaaʔic	170. maaʔil
137. jaaʔiH	171. maaDiy
138. jaaʔiz	172. maahir
139. jaaddin	173. maajin
140. jaafin	174. maakir
141. jaaHid	175. maaliH
142. jaahil	176. maanic
143. jaaHiZ	177. maaʔil
144. jaahiz	178. naaʔim
145. jaalis	179. naaʔiy
146. jaamic	180. naabic
147. jaamid	181. naabit
148. jaamiH	182. naacim
149. jaarif	183. naacis
150. jaariH	184. naaDib
151. jaariy	185. naaDij
152. kaaʔb	186. naadim
153. kaaʔin	187. naaDir
154. kaabiy	188. naadir

189. naafið	219. qaahir
190. naafic	220. qaanic
191. naafir	221. qaaniy
192. naafit	222. qaariS
193. naahiD	223. qaaSid
194. naaHil	224. qaaSif
195. naajiH	225. qaaSir
196. naajin	226. qaasir
197. naaqic	227. qaasiy
198. naaqid	228. qaatil
199. naaqim	229. qaatim
200. naaqiS	230. raaʔic
201. naaʔiʔ	231. raaʔiq
202. naaʔib	232. raabiD
203. naaSib	233. raacid
204. naaSic	234. raacy
205. naatij	235. raaDiy
206. naaTiq	236. raafiD
207. naazif	237. raagib
208. naaziH	238. raaHil
209. naazil	239. raahin
210. qaaʔim	240. raajiy
211. qaabic	241. raakin
212. qaabiD	242. raaqid
213. qaabil	243. raaqiS
214. qaacid	244. raasix
215. qaadim	245. saaðij
216. qaadir	246. saaʔil
217. qaaDiy	247. saaʔir
218. qaaHil	248. SaabiH

- | | |
|-------------|-------------|
| 249. saabiH | 279. saaxin |
| 250. saabiq | 280. saaxir |
| 251. Saabir | 281. saaxiT |
| 252. Saacid | 282. jaa?ih |
| 253. Saaciq | 283. jaa?ik |
| 254. Saadiq | 284. jaa?in |
| 255. Saadir | 285. jaa?iq |
| 256. Saafin | 286. Jaacir |
| 257. saafir | 287. Jaagil |
| 258. Saagiy | 288. jaaHib |
| 259. saahim | 289. Jaahiq |
| 260. saaHiq | 290. Jaakiy |
| 261. saahir | 291. Jaamil |
| 262. SaaHiy | 292. Jaamit |
| 263. saajid | 293. Jaamix |
| 264. saajiy | 294. Jaaqiq |
| 265. saakin | 295. Jaarid |
| 266. saakit | 296. JaaxiS |
| 267. SaaliH | 297. taa?ih |
| 268. saalim | 298. Taa?il |
| 269. Saamid | 299. Taacin |
| 270. saamiq | 300. TaafiH |
| 271. Saamit | 301. taafih |
| 272. saamiy | 302. Taagin |
| 273. saaniH | 303. TaaHin |
| 274. saarid | 304. Taahir |
| 275. Saarix | 305. Taalic |
| 276. saariy | 306. Taaliq |
| 277. saaTic | 307. taaliy |
| 278. Saaxib | 308. TaamiH |

309. Taanic	340. xaafiq
310. Taari?	341. xaafit
311. Taazij	342. xaafiy
312. ʔaaʔir	343. xaalid
313. ʔaabit	344. xaaliq
314. ʔaakil	345. xaaliS
315. ʔaaqib	346. xaaliy
316. waacid	347. xaamid
317. waaciy	348. xaamil
318. waaDiH	349. xaaniq
319. waafir	350. xaarij
320. waafiy	351. xaariq
321. waahib	352. xaaʔic
322. waaHid	353. xaaSin
323. waahij	354. xaasir
324. waahim	355. xaaTi?
325. waajif	356. xaaTif
326. waajim	357. xaawin
327. waaniy	358. yaaʔis
328. waaqic	359. yaafic
329. waaqif	360. yaanic
330. waarid	361. zaaʔid
331. waarim	362. zaaʔif
332. waaʔiy	363. zaaʔig
333. waasic	364. zaaciq
334. waatiq	365. zaahid
335. xaaʔib	366. zaaHif
336. xaaʔif	367. Zaahir
337. xaaʔir	368. zaahiy
338. xaaDic	369. Zaalim
339. xaadic	370. zaaxir

1. ma?luuf	31. marsuum	61. maSluub
2. ma?muun	32. marcuub	62. maSnuuc
3. mabHuuH	33. marmuuq	63. maDguuT
4. maθquub	34. marhuub	64. maDmuum
5. majbuur	35. marhuun	65. maDmuun
6. majduuH	36. mazruuc	66. maTruuH
7. majnuun	37. mazcuum	67. maTcuun
8. majhuul	38. mas?uul	68. maTluub
9. maHbuub	39. mas?uum	69. maTmuur
10. maHtuum	40. masHuur	70. maTmuus
11. maHduud	41. masHuuq	71. maZluum
12. maHruuq	42. masduud	72. macduud
13. maHruum	43. masruur	73. macruuD
14. maHzuun	44. masTuul	74. macruuf
15. maHsuub	45. masquuf	75. macruuq
16. maHsuud	46. maskuun	76. maczuul
17. maHsuus	47. masluux	77. maczuuq
18. maHjuur	48. masmuuc	78. macsuul
19. maHfuur*	49. masmuum	79. macSuub
20. maHluuq	50. maʃHuun	80. macquud
21. maHmuud	51. maʃduud	81. macquul
22. maHmuum	52. maʃTuur	82. mackuus
23. maxduuc	53. maʃguul	83. machuud
24. maxTuub	54. maʃluul	84. magruur
25. maxmuur	55. maʃmuum	85. magʃuuʃ
26. madcuum	56. maʃhuud	86. magluuT
27. madfuuc	57. maʃhuur	87. magluul
28. madfuun	58. maSbuub	88. maftuuH
29. maθbuuH	59. maSHuub	89. maftuul
30. maθcuur	60. maSquul	90. maftuun

91.	mafruuJ	121.	mankuur	151.	majduuh
92.	mafruuq	122.	manhuuk	152.	maSbuug
93.	mafTuur	123.	mahjuur	153.	maDruub
94.	mafcuul	124.	mahzuul	154.	mactuuh
95.	mafquud	125.	mahmuus	155.	macruuJ
96.	mafkuuk	126.	mahmuum	156.	macTuub
97.	maqbuur	127.	mawjuud	157.	magruus
98.	maqbuul	128.	mawduuc	158.	magsuul
99.	maqSuud	129.	mawruuθ	159.	magluub
100.	maqTuuc	130.	mawsuum	160.	magluuJ
101.	maktuub	131.	mawfuur	161.	mafruuD
102.	maktuum	132.	may?uus	162.	maqrurun
103.	makJuuf	133.	maysuur	163.	maqluub
104.	makluum	134.	mabtul	164.	maktuub
105.	malHuuZ	135.	maHzuum	165.	makruuh
106.	malcuun	136.	maHfuur	166.	maksuur
107.	malfuuf	137.	maHfuuZ	167.	manJuud
108.	malmuus	138.	maxzuun	168.	manquul
109.	mamduud	139.	maxluuc	169.	mankuud
110.	mamzuuj	140.	maxluuq	170.	mankuuJ
111.	mamJuuj	141.	madkuuk	171.	manhuub
112.	mamSuuS	142.	marHuum	172.	mahruus
113.	mamluu?	143.	marSuuS	173.	mawcuud
114.	mamnuuc	144.	marfuuc	174.	mawquut
115.	mansuuj	145.	mazcuur	175.	mawhuub
116.	manJuur	146.	mazhuul	176.	mawhuum
117.	manguum	147.	masfuuk		
118.	manfuuf	148.	maf?uum		
119.	manquuJ	149.	mafbuub		
120.	manquuS	150.	mafHuuδ		

1.	ḡahab	33.	maSr
2.	baaTin	34.	kuHl
3.	badan	35.	laHm
4.	baHr	36.	macdan
5.	balluur	37.	madan
6.	bayDaaw	38.	malak
7.	buxaar	39.	manzil
8.	?unθaw	40.	maTTaaT
9.	caa?il	41.	mifSal
10.	caalam	42.	qur?aan
11.	caql	43.	ramaad
12.	carab	44.	ruxaam
13.	?aθar	45.	Sadr
14.	caSab	46.	samaaw
15.	casal	47.	SaTH
16.	caskar	48.	Sawt
17.	ciTr	49.	ḡams
18.	daa?ir	50.	sulTaam
19.	?axaw	51.	suur
20.	daam	52.	Tabiic
21.	Dabaab	53.	θalj
22.	damaw	54.	Tiin
23.	fiTr	55.	Tufuul
24.	Daw?	56.	turaab
25.	farc	57.	wafd
26.	fiDD	58.	waHḡ
27.	jaliid	59.	ward
28.	tifilifiziyun	60.	wariid
29.	Hajar	61.	waTan
30.	jasad	62.	xaḡab
31.	jism	63.	zawj
32.	kitaab	64.	zayt

65. ɬarr	100. camuud	144. qamH
66. ʔaadam	101. caqaar	145. qawm
67. ʔab	102. ciraaq	146. qimaaʃ
68. ʔafranj	103. dawl	147. qurunful
69. ʔaj nab	104. daynasuur	148. raʔiis
70. ʔalmaan	105. dimiʃq	149. raʔs
71. ʔamriik	106. dimirdaaʃ	150. riif
72. ʔanTaak	107. faaris	151. ruus
73. ʔarD	108. falak	152. SaHraaw
74. ʔazhar	109. farans	153. Saxr
75. ʔiɬaac	110. fisfuur	154. jacb
76. ʔigriiq	111. fulaaɬ	155. jaxS
77. ʔilaah	112. gaaz	156. Sibyaan
78. ʔinjiliiz	113. gahrumaan	157. sinjaab
79. ʔinsaan	114. Habaʃ	158. turk
80. ʔiskandaraan	115. Hadiid	159. wabar
81. ʔisraaʔiil	116. Halazuun	160. waʔan
82. ʔiTaal	117. hamaj	161. xarasaan
83. ʔurjuwaan	118. Hariir	162. yadd
84. ʔurubb	119. Hayawaan	163. zacfaraan
85. ʔustaaɬ	120. jabal	164. Zahr
86. baabil	121. januub	165. zinj
87. balad	122. jawhar	166. zujaaj
88. badaw	123. jaww	167. zumurrud
89. bahiim	124. juhannam	168. ʔabad
90. bahlawaan	125. kaaz	169. ʔadab
91. banafsaj	126. kanad	170. ʔasaas
92. barr	127. kawn	171. ʔaSl
93. baʃar	128. lawz	172. ʔaxiSaaʔ
94. binzihiir	129. maaʔ	173. ʔaxlaaq
95. biriiTaan	130. maadd	174. ʔibdaac
96. buliis	131. maal	175. ʔicdidaad
97. bunn	132. madras	176. ʔiclaam
98. caaj	133. magnaatiis	177. ʔictiraaf
99. cabqar	134. magrib	178. ʔidaar

179.	?iHtiyaaT	214.	giɖaa?	249.	qadar
180.	?ijbaar	215.	ginaa?	250.	qiyaas
181.	?ijtimaac	216.	HaDaar	251.	rajc
182.	?intiHaar	217.	Hamaas	252.	rasm
183.	?intiqaaam	218.	Hamraaw	253.	riwaa?
184.	?iqtiSaad	219.	handas	254.	riyaaD
185.	?iraad	220.	Haqiiq	255.	rujuul-
186.	?ijtiraak	221.	Harb	256.	SaHaf
187.	?islaam	222.	Hatm	257.	saHar
188.	?istikJaaf	223.	Hisaab	258.	Sayf
189.	?isTinaac	224.	Hiss	259.	Jarc
190.	?ixtiyaar	225.	hujuum	260.	JayTaan
191.	baSar	226.	Hukuum-	261.	SiHH
192.	budaa?	227.	jaahil	262.	silb
193.	caad	228.	jaamic	263.	Jarq
194.	caaTif	229.	jaanib	264.	Jitw
195.	cabaθ	230.	jamaac	265.	Jucuur
196.	cadaa?	231.	jinaa?	266.	siHr
197.	camal	232.	jins	267.	sirr
198.	carD	233.	junuun	268.	Suuf
199.	caSr	234.	kahrubaa?	269.	taariix
200.	cilm	235.	kalaam	270.	tafaa?ul
201.	cudwaan	236.	mabda?	271.	tafjiir
202.	culw	237.	marad	272.	tafSiil
203.	cumuum	238.	mar?iy	273.	tahakkum
204.	cuθr	239.	miθaal	274.	taHDiir
205.	cafw	240.	marad	275.	taHtaan
206.	daaxil	241.	milk	276.	taktiik
207.	difaac	242.	naql	277.	tamθiil
208.	diin	243.	naZar	278.	tamwiin
209.	diraas	244.	niDaal	279.	taqliid
210.	faqr	245.	nihaa?	280.	taTbiiq
211.	fikr	246.	nihaad	281.	tatwiij
212.	fujaa?	247.	nisb	282.	θaqaaf
213.	garb	248.	qaanuun	283.	Tibb

284.	tijaar	304.	ḡaat	324.	malaaʔk
285.	waaqic	305.	ʔallaanihaaʔ	325.	manTiq
286.	wahm	306.	ʔanaan	326.	mawDuuc
287.	waqt	307.	ʔanθrubuluj	327.	musiiq
288.	wiraaθ	308.	ʔarbaciin	328.	raʔsmaal
289.	wujuud	309.	ʔawwal	329.	rabiic
290.	xaarij	310.	ʔurusTuqraaT	330.	ruuH
291.	xalf	311.	ʔusbuuc	331.	saykluj
292.	xataam	312.	ʔusTuur	332.	ʔahr
293.	xayaal	313.	burjuwaaz	333.	sinfuun
294.	xayr	314.	buTuul	334.	sufI
295.	xuluq	315.	dacjawaan	335.	θaanaw
296.	xuraaf	316.	Daruur	336.	tilqaaʔ
297.	xuruuj	317.	dinamiik	337.	xaak
298.	xuSuuS	318.	fawr	338.	yawm
299.	Zaahir	319.	Hayaat		
300.	ziraac	320.	jidd		
301.	fann	321.	kalaasiik		
302.	marad	322.	kiimaaw		
303.	naZar	323.	layI		

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| 1. mu?addab | 34. mufattaH | 67. mulawwaθ |
| 2. mu?ahhal | 35. mufattat | 68. mumattac |
| 3. mu?ajjal | 36. mugaTTiy | 69. mumawwah |
| 4. mu?akkad | 37. muhaθab | 70. mumayyaz |
| 5. mu?aqqaT | 38. muHabbab | 71. mumazzaq |
| 6. muahaddad | 39. muHaddad | 72. munaggam |
| 7. mubaddal | 40. muhaddam | 73. munakkas |
| 8. muballal | 41. muHajjab | 74. munammam |
| 9. muballaT | 42. muhammal | 75. munammaq |
| 10. mubaTTan | 43. muHammar | 76. munaqqaT |
| 11. mucabba? | 44. muHannak | 77. munawwam |
| 12. mucabbaq | 45. muHannaT | 78. munaZZam |
| 13. mucallaq | 46. muHarram | 79. muqaccar |
| 14. mucammam | 47. muHarrar | 80. muqaddas |
| 15. mucammar | 48. muHaTTam | 81. muqannac |
| 16. mucaqqad | 49. muHattam | 82. muqannan |
| 17. mucaθar | 50. mujaffaf | 83. muqarrar |
| 18. mucaTTal | 51. mujammal | 84. muqaTTar |
| 19. mucattaq | 52. mujarrad | 85. muqawwas |
| 20. mucaTTar | 53. mujarraH | 86. muqayyad |
| 21. mucayyan | 54. mujassad | 87. murabbaT |
| 22. mucaZZam | 55. mujawwaf | 88. murakkab |
| 23. muDabbab | 56. mukabbal | 89. murakkaz |
| 24. mudabbab | 57. mukallaf | 90. muraqqac |
| 25. muDallac | 58. mukallal | 91. muraqqam |
| 26. mudammiy | 59. mukarram | 92. muraSSac |
| 27. mudannas | 60. mukarrar | 93. murattab |
| 28. muDawwac | 61. mukawwam | 94. musaddad |
| 29. mudawwan | 62. mukawwan | 95. musallaH |
| 30. muDayyac | 63. mulabbad | 96. musammar |
| 31. mufaDDaD | 64. mulaffac | 97. muSawwar |
| 32. mufaDDal | 65. mulaTTax | 98. mujabbac |
| 33. mufaSSal | 66. mulawwan | 99. mujaddad |

100. muJammar	133. muhaddid	166. munaarat
101. muJaqqaq	134. muhallil	167. muSaadar
102. muJarraf	135. muHalliq	168. muJaahad
103. muJattat	136. muHayyir	169. mutaaH
104. muJawwah	137. mujarrib	170. mutaaHat
105. muJayyad	138. munaffiḥ	171. muTaalab
106. muTaccam	139. munaJjiT	172. muTaarak
107. muTahhar	140. muqallid	173. muwaarab
108. muTarraz	141. muqaTTib	174. muwaarad
109. muTawwaq	142. muqaTTir	175. mubaagit
110. muTayyan	143. murawwic	176. mubaaliy
111. muṯabbat	144. muSaddiq	177. mubaaJir
112. muṯahhab	145. muSaffiq	178. mucaadiy
113. muṯallaj	146. musalliy	179. mucaakis
114. muṯaqqaf	147. muSammim	180. mucaaniq
115. muwaffaq	148. muJawwiq	181. mucaaSir
116. muwajjah	149. muṯabbiT	182. muDaahiy
117. muwaqqar	150. muwarrid	183. mufaaji?
118. muwazzac	151. muxaddir	184. muHaaṣiy
119. muxaddar	152. mubaac	185. muHaafiZ
120. muxaTTaT	153. mubaalag	186. muhaajir
121. muZaffar	154. mubaalaq	187. muHaayid
122. muzajjaj	155. mubaarak	188. mujaawir
123. muzawwad	156. mubaaraz	189. mulaa'im
124. muzawwar	157. mucaafat	190. mulaaSiq
125. muzayyan	158. mucaaJat	191. mulaazim
126. muʔaṯṯir	159. muDaaʔat	192. munaafiq
127. mubakkir	160. muDaacaf	193. munaasib
128. mucaṯṯib	161. muDaacah	194. muqaabil
129. mugarrid	162. muDaadat	195. muqaarib
130. mudammir	163. mufaaja?	196. musaalim
131. mufakkir	164. muHaaSar	197. muJaakis
132. mugarrib	165. muHaaT	198. muTaarid

199. mutaaxim	232. muJcaθ	265. mugDin
200. muwaafiq	233. muJrab	266. mugriy
201. muwaajih	234. mutcab	267. muHdiq
202. muwaaliy	235. muθqal	268. muhlik
203. muwaarib	236. muTlaq	269. muHniq
204. muwaaziy	237. mutraf	270. muHrij
205. muxaalif	238. mutrac	271. muHriq
206. mubham	239. muxDab	272. muHzin
207. mucjab	240. muθcin	273. mujdin
208. mudmaj	241. muθhil	274. mujrim
209. muDmax	242. mu?θiy	275. mulfit
210. mufcam	243. mu?lim	276. mulHid
211. mugfar	244. mu?min	277. mulhim
212. muglaq	245. mu?riq	278. mumkin
213. muglaq	246. mu?sif	279. mumsik
214. mugmaD	247. mu?θil	280. mumtic
215. mugram	248. mu?θir	281. munθir
216. muHdaθ	249. mubhir	282. munciJ
217. muhlak	250. mubriH	283. munqiθ
218. muhmal	251. mucjiz	284. munSit
219. mujhad	252. muctim	285. muntij
220. mulqay	253. muDHik	286. muqθic
221. munkar	254. mudhiJ	287. muqbiD
222. munSab	255. mudmin	288. muqbil
223. muqfal	256. mudqic	289. muqfir
224. murhaf	257. muDrib	290. muqmir
225. mujbar	258. mudrik	291. muqnic
226. muclan	259. muDrim	292. murcib
227. munhak	260. mufDiy	293. murcid
228. murhaq	261. mufjic	294. murhiq
229. mursal	262. muflis	295. muSgiy
230. musdal	263. mufriT	296. muJfiq
231. muJbac	264. mufzic	297. muJmis

298. muJrif	331. muta?axxir	364. mutajahhim
299. muJriq	332. mutabarrim	365. mutajalliY
300. mubTi?	333. mutabattil	366. mutajarriD
301. musric	334. mutacaddid	367. mutajassim
302. musrif	335. mutacallim	368. mutajassid
303. muTbiq	336. mutacalliq	369. mutakawwim
304. mutcib	337. mutacammid	370. mutalabbid
305. muθmir	338. mutacarrif	371. mutalaffic
306. mutqin	339. mutacarriq	372. mutalaffiH
307. muTrib	340. mutacaTTil	373. mutalawwin
308. muwHiJ	341. mutadaffiq	374. mutamahhil
309. muwjic	342. mutaDawwic	375. mutamalliq
310. muwrid	343. mutadayyin	376. mutamarriD
311. muwriq	344. mutafajjir	377. mawwij
312. muwJik	345. mutafakkir	378. mutanakkir
313. muxjil	346. mutafarric	379. mutanaqqil
314. muxliS	347. mutafarriq	380. mutaqabbiD
315. muxTi?	348. mutafaSSid	381. mutaqallib
316. muzbid	349. mutafassix	382. mutaqalliS
317. muzcij	350. mutafattiH	383. mutaqaTTic
318. muZlim	351. mutagayyir	384. mutarabbic
319. mutaxayyal	352. mutahaddij	385. mutaraddid
320. mutacammad	353. mutaHaddiy	386. mutaraddiy
321. mutahattak	354. mutaHajjir	387. mutaraffic
322. mutawaqqac	355. mutaHakkim	388. mutaranniH
323. muta?abbiT	356. mutaHammim	389. mutasabbib
324. muta?ajjij	357. mutaHarrik	390. mutaSabbir
325. muta?akkid	358. mutaHarriR	391. mutasallil
326. muta?allim	359. mutaHarrif	392. mutasalliq
327. muta?alliq	360. mutaHarriJ	393. mutasalliT
328. muta?anniq	361. mutaharriY	394. mutaSarriF
329. muta?aSSil	362. mutaHayyir	395. mutacaffin
330. muta?awwih	363. mutajaddid	396. mutaJabbic

397. mutaJabbiθ	430. mutahaamis	463. mutataaliy
398. mutaJannij	431. mutahaawiy	464. mutaTaayir
399. mutaJaqqiq	432. mutajaahil	465. mutaθaaqil
400. mutaTallic	433. mutajaawib	466. mutawaaDaca
401. mutaTayyir	434. mutalaaHim	467. mutawaariy
402. mutawaccid	435. mutalaaHiq	468. mutawaaSil
403. mutawaddid	436. mutalaaSiq	469. mutaxaaSim
404. mutawaffir	437. mutalaaTim	470. mutazaaHim
405. mutawahhiy	438. mutamaadiy	471. mutazaayid
406. mutawaHHij	439. mutamaasik	472. munbaciθ
407. mutawajjic	440. mutamaawij	473. munbasiT
408. mutawajjih	441. mutamutabaacid	474. munbaθiq
409. mutawakki?	442. mutamutataabic	475. munbaTiH
410. mutawaqqic	443. mutanaabiθ	476. muncadim
411. mutawarrid	444. mutanaafir	477. muncakis
412. mutawarrim	445. mutanaahiy	478. muncazil
413. mutawassim	446. mutanaasiq	479. mundafic
414. mutawattir	447. mutanaasiy	480. mundamij
415. mutaxallif	448. mutanaaθir	481. munfacil
416. mutayaqqiZ	449. mutaqaabil	482. munfarid
417. mutazawwij	450. mutaqaacid	483. munfaSil
418. mutabaadal	451. mutaqaarib	484. mungaliq
419. muta?aakil	452. mutaqaatTic	485. munhamik
420. mutabaacid	453. mutaraajic	486. munHaniy
421. mutabaayin	454. mutaraakim	487. munHarif
422. mutacaaqib	455. mutaraamiy	488. munHaJir
423. mutadaaciy	456. mutaraaxiy	489. munhazim
424. mutadaafic	457. mutasaa?il	490. munjaθib
425. mutaDaarib	458. mutaSaacid	491. munkamiJ
426. mutadaaxil	459. mutaJaa?im	492. munkasir
427. mutagaamiq	460. mutaJaabih	493. munnaSib
428. mutahaafit	461. mutaJaabik	494. munqabiD
429. mutahaalik	462. mutataabic	495. munqaDiy

496. munqalib	531. muDtarib	566. murtahin
497. munqaTic	532. muftariq	567. murtajif
498. munSahir	533. muftaris	568. murtakiz
499. munsajim	534. mugtarib	569. muJtabik
500. munSarim	535. mugtaSib	570. muJtacil
501. munJagil	536. muHtadim	571. mutazin
502. munJariH	537. muHtariq	572. mutta?id
503. munJir	538. muhtaris	573. muttaHid
504. munTabiq	539. muHtaJim	574. muttajih
505. muntahiy	540. mujtahid	575. muttaqid
506. munTaliq	541. mujtamic	576. muttaJiH
507. muntaJir	542. mukta?ib	577. muttasil
508. munTawiy	543. muktamil	578. muttaSil
509. muntaZim	544. multahib	579. muxtafiy
510. munxafiD	545. multaSiq	580. muxtalif
511. munzaciJ	546. multawiy	581. muxtalij
512. mubta?al	547. mumtaciD	582. muxtaniq
513. muctaraf	548. mumtali?	583. mustacbad
514. muftacal	549. mumtaqic	584. mustaHkam
515. muftaqad	550. mumtazij	585. musta?nis
516. mugtaSab	551. muntahiy	586. mustabJir
517. muHtaram	552. muntaJir	587. mustabsil
518. muktasab	553. muntaSib	588. mustacjil
519. muntazac	554. muntaZim	589. mustacSiy
520. murtaqab	555. muqtaDib	590. mustahlik
521. muJtarak	556. muqtaHim	591. mustahtir
522. muttabac	557. muqtanic	592. mustakinn
523. muttafaq	558. muqtarib	593. mustanfi?il
524. muxtalas	559. muqtaSid	594. mustansix
525. mubta?il	560. murtabik	595. mustariqq
526. mubta?is	561. murtabiT	596. mustarsil
527. mubtahij	562. murtacid	597. mustarxiy
528. mubtahil	563. murtaciJ	598. mustaslim
529. muctadil	564. murtadiy	599. mustayqiZ
530. muctakif	565. murtafic	

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